

A Synthesis and Interpretation of the Biology of Woodland Caribou on the Island of Newfoundland

Shane P. Mahoney
Chief of Ecosystem Research and Inventory
December 2000



Weather Patterns in Insular Newfoundland
Volume 2

**A SYNTHESIS AND INTERPRETATION OF
THE BIOLOGY OF WOODLAND CARIBOU
ON THE ISLAND OF NEWFOUNDLAND**

Final Report
December 2000

VOLUME 2

INSULAR NEWFOUNDLAND WEATHER

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Foreword

Perhaps nowhere else on earth has the power of place so completely invaded the soul and psyche of a people as in Newfoundland. The extraordinary sense of home our people have developed and continue to share is the manifest destiny of a human culture tied to the seasons and rhythms of land and sea, of nature in all her moods and obsessions. It is a destiny characterised by an abiding interest in and love for the creatures and landscapes that collectively define the wild beauty of this great island. Wildlife, in all its myriad forms, is an irreplaceable element of our world view and influences fundamentally our sense of values and our definition of what the good in life entails. Wild creatures are for Newfoundlanders an enduring source of pride and fascination, and knowledge of them is highly regarded. Whether in the pub, community store, cabin or kitchen, the health and abundance of wildlife is a topic of general and passionate discussion.

The conservation of wildlife species, our first resource, depends ultimately upon how well we understand their biology. No amount of passionate concern can, by itself, guide their continued abundance and vitality; only a detailed knowledge of their requirements for space and food, their interactions with predators and competitors, and their limits of tolerance for human intrusions, can accomplish this. Even then, their future is not assured. Without this knowledge however, their disappearance almost certainly is. Too many times we have witnessed the grim outcomes of nature exceeded, the insurmountable realities of once abundant populations laid waste and their recovery a process entirely beyond our ken and influence. For the world entire these episodic holocausts are proving collectively the greatest challenge to prosperity and peace; for cultures such as ours their impacts are immediate and devastating to both economy and pride. No species, no matter how prolific, no matter how abundant, indeed no matter how esteemed, is beyond the reach of such crisis. The precipitous and long to be lamented collapse of the great shoals of cod should be all we ever need to remember!

Caribou have undertaken their relentless wanderings of this island for millennia. Visiting or perhaps even persisting during the last great ice advance, they were undoubtedly here when the first humans arrived some five thousand years ago. For these, the Maritime Archaic Indians, as for the next groups, the Groswater and Dorset Palaeo-Eskimos arriving around 800 to 600 B.C. respectively, and for the Recent Indians which tracked their way to the island in the first five centuries A.D., caribou were the one terrestrial mammal to occur in large and predictable numbers. The animal's signal importance to the indigenous Beothuck is well known, and we may expect that even the earlier more seafaring cultures relied upon caribou as an important, if not vital, seasonal source of food and fur. Certainly through the long period of European settlement the caribou, or "deer" as they have long been referred to, represented a major source of fresh meat to communities of men isolated by geography and season, and their pursuit was a predictable part of the hunter-gatherer life rhythm that persists in significant measure unto present day.

As times and economies have changed the absolute necessity of caribou as a source of sustenance has modified, evolving through a period of direct commercial exploitation earlier in this century to becoming today a more complex resource relationship tied to tourism and the maintenance of cultural vitality and traditions. The sudden appearance of caribou in any region of the island, a phenomenon tied to their wandering predispositions and highly evolved relationship with slow-to-change vegetation communities, is an unending source of excitement and wonder. The gentle disposition and graceful beauty of these animals, combined with their gregarious habits and approachability, make them a signal species, helping to define for all Newfoundlanders their perceptions of home as a place of wild

beauty and natural blessings. It is for these many reasons, both primitive and more humanistic, that the conservation of caribou must represent an enduring concern for our people.

Fortunately the attributes that have led to and yet define the importance of caribou in the Newfoundland context have meant that their historical fluctuations may be traced from the remarks of many observers. From the impassioned accounts of hunter naturalists early this century, to the more rigorous academic presentations on Newfoundland by respected historians, as well as the reported remarks of legislators and editorialists, we can now compile the long arc of caribou abundance. From this we understand that great extremes in numbers have occurred, and that in the early twentieth century a rapid and deep decline presaged a protracted rareness that persisted until the 1960's. For many of us today this is hard to imagine, used as we are to the great herds that now exist virtually island wide. The reality is however that we have entered the new millennium perhaps poised once more for a great change in caribou numbers, a change that would have significant implications for those traditions and economies reliant on abundant and tractable herds. How would we prepare ourselves?

To assess the background and context of such change and to delineate its probabilities and magnitudes required a complete review and interpretation of information existing on Newfoundland herds. The idea developed here has no precedent I am aware of in the annals of Newfoundland wildlife; and very few, for that matter, anywhere in the world. It is ground breaking work of great magnitude and complexity; essentially the scientific history of Newfoundland's only indigenous ungulate, as witnessed by generations and studied by field naturalists and scientists for fifty years. Every fragment of significant information available on the twelve native and twenty-three introduced herds is scrutinized, validated, and presented, resulting in one all-inclusive library of caribou information. Furthermore, the information is analysed in a comprehensive way, illuminating the interactive and often codependant processes of physical and demographic change which are at once the evolutionary engines of nature and the sign posts wildlife managers use to measure the cadence and position of animal responses to their environments.

By studying the past and present for Newfoundland herds in this fashion, the current work strives to represent the various populations as living entities engaged in an unending organic engagement with the landscapes, weather and people of this island. Uniquely, it attends to these relationships with the full expectation that the herds are also engaged in an unending pursuit of one another, operating as one giant organism that periodically divides and fuses its component parts, retreating during times of resource scarcity and high mortality, and expanding as conditions and opportunities improve. The findings presented here are therefore of significant value to the broad scientific community, coursing as they do along the wave crest of modern meta-population theory; and they will offer much as well to those who more specifically seek an understanding of large mammal dynamics. The stature of this work therefore reflects Newfoundland's long standing commitment to professional wildlife science, which is itself the very signature of professional wildlife management. Science, by definition, is a pursuit of understanding that is retraceable along contours of broadly applicable principles. That Newfoundland governments have for fifty years maintained a commitment to such ideals is a sign of maturity and stature that should be safeguarded at all costs. That we can meaningfully contribute to the world's collective memory and understanding of wildlife ecology is a position of statesmanship and a legacy of inestimable value.

Of course the immediate and greatest purpose of this exercise is to provide a framework for the long term management of insular Newfoundland caribou. It is to this end that the comments and efforts of so many have for so long been directed; and it is upon this objective that my own research efforts have focussed for the last twenty years. Throughout this period I was fortunate to have inherited a great treasure of information, a vigorous legacy upon which to fashion further advances in our understanding

of caribou. I was also fortunate to work in an organization, the Newfoundland and Labrador Wildlife Division, that understood the purpose and value of such work. Thus, this effort should be viewed as one significant step on a long and continuing journey; no more...and no less. Along the way there have been many contributors, as there must always be if significant history is to exist.

Of all such contributors, none can be held in higher esteem than the small but dedicated group of wildlife field men who traversed this island by foot, aircraft, boat and snowmachine to record the biology, abundance and welfare of caribou. Beyond any question their efforts will stand as an emblem to what dedicated public service to both ideals and nation really means. Without their perseverance and ingenuity, without their knowledge of equipment, land and animals, and without their mature capacity as woodsmen and naturalists, this synthesis and all good which results from it could only be wished for. The transformation from dream to reality is the inheritance these individuals have passed on. Time will tell how we have invested or squandered it; pray that we do not suffer its loss. While it is impossible to identify them all, this work is dedicated, with my deepest respect and appreciation, to each and every one of them.

Just as no one individual could ever amass the quantity of information assembled here, so too would it be impossible for any one individual to assemble, edit, analyse and depict the voluminous entries and combinations of these data. I have been again uniquely fortunate to have worked with a group of highly capable and motivated individuals throughout the synthesis process and it is no more than the absolute truth to state that it could not have been accomplished without their efforts and support. From the first strivings to gather the Wildlife Division's caribou files into a central registry, to the final editorializing and digital organization of these volumes, I have met only professionalism and energy. I have also sought and encountered great competence, that elusive elixir which remains the hallmark of effective, lasting science.

This always evolving group has included a great variety of positions and personalities, from part-time students and geographic technicians, to secretarial and computer support personnel. The extent of their contributions varied enormously, but all were crucial and I thank them sincerely. However, for assistance in synthesizing this work, my greatest appreciation must go to Dr. Brian McLaren and Ms. Tammy Joyce. It is far more than a trite cliché to state that without their efforts this ponderous beast would never have been slain. Their work must be remembered as crucial, their contributions lasting, and their commitment to the inherent value of this process compelling. They were involved from the first formal beginnings of this enterprise, performed every task with consideration, and came to every wearisome meeting and lively discussion armed with diligence and good humour. The latter was sometimes a hard thing to capture through the long, winding tunnels of revision, error and repetition; but retain it they did. For all these reasons I am truly indebted.

I must also specifically thank Ms. Christine Doucet and Ms. Marlene Dredge, two individuals more recently engulfed by this labour, but to whom many finalizing tasks have been handed. I thank them both sincerely; Christine for her diverse assistance and editorial acumen, and Marlene especially for her seemingly limitless capacity for painstakingly detailed work on figure preparation and file organization.

Of course no process of this kind, involving as it does the secondment of an organization's human resources to focussed task, can ever proceed without the vision and support of executive approval. Too frequently the unending march of issue and crisis smothers the potential for creative invention, and the stereotypic political mule emerges from the shadows of senior administration. The image is, unfortunately, too often true. I well recognize therefore the unique position I found myself in when

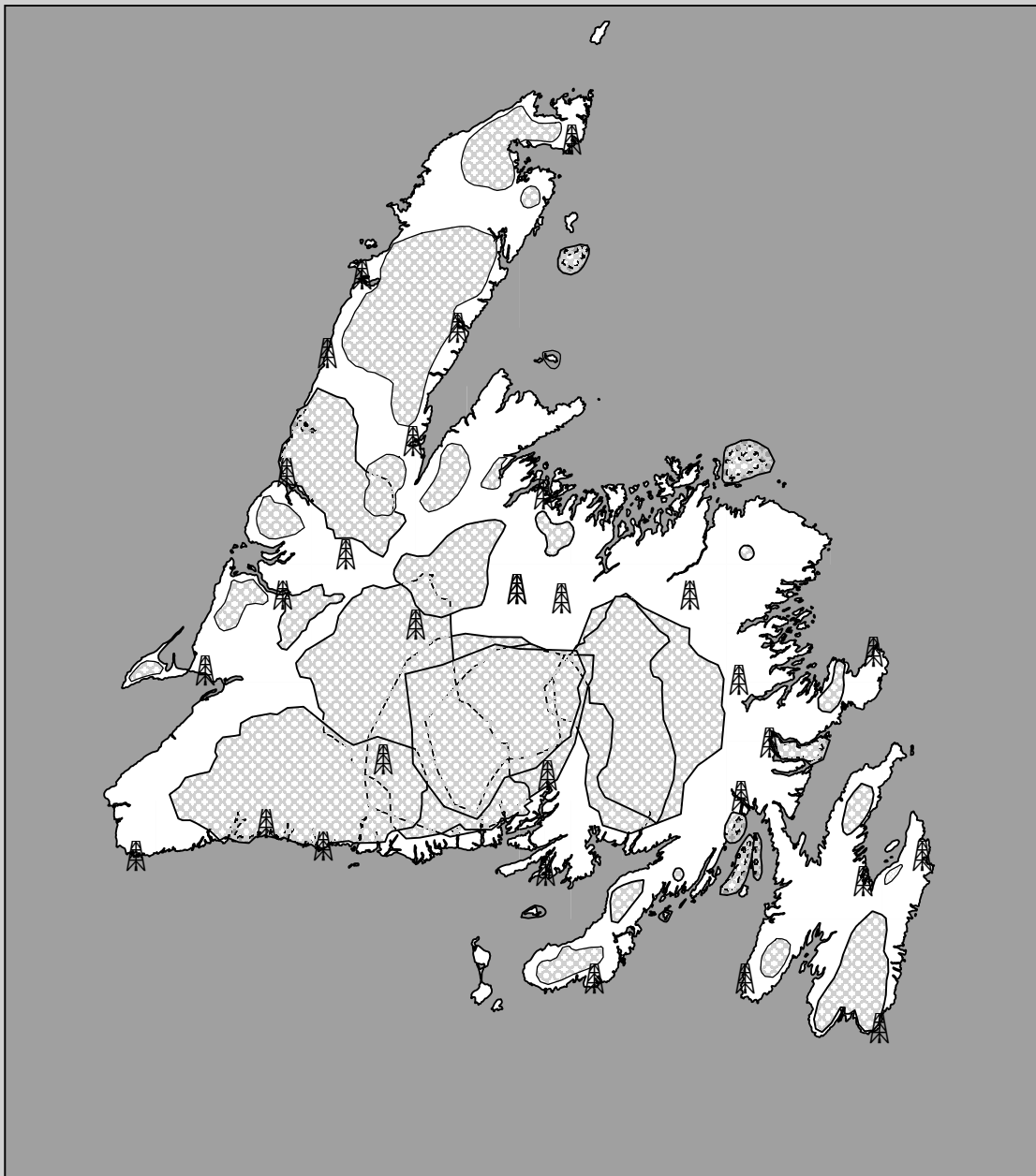
approval for this work was granted, and, perhaps even more, to have had continuing support throughout its progress. I wish to personally thank Dr. Mohammed Nazir for his great capacity to retain the poetic view; it is a wondrous and unending gift. I will always appreciate, not only the support he has lent this process, but also his commitment to ideas and the cultivation of human potential. I also thank his supervisors, Mr. Halcom Stanley and Mr. Robert Smart, for having understood and supported this initiative as well.

Mr. James Hancock, Director of the Wildlife Division and my supervisor of many years, must also be especially recognized for his early and enduring support of the synthesis project. Mr. Hancock and I have shared many discussions over the years regarding the importance of data analysis and accessibility, and I thank him sincerely for his support of me personally and of this important idea. Likewise I thank Mr. Michael Cahill, gentleman, stump philosopher and Zen hound, for agreeing to take on my other responsibilities while I was engaged in this task, and for doing it so courteously and well. Both men are aware, I trust, of my gratitude. To both of these individuals in particular, engaged as they are in the tidefull sway of everyday wildlife management, I also express my confidence in the lasting value, practically and emblematically, of this work they have supported and encouraged. It is what Wildlife Divisions and Wildlife Biologists should do.

To this long list of acknowledgements I must add one more outstanding contribution. Dr. Valerius Geist has been a mentor, ally, friend, and supporter throughout my career and has from the first notion of this synthesis provided every possible encouragement and assistance. This has extended to a periodic adoption of me by Mrs. Geist and himself, as I have retreated to their land and location (immigrants all!) to write, think and discuss. To work! When this effort and its kin are completed, no contribution will figure more prominently in memory or in fact than the tropical richness of ideas, energy and civilization encountered in their midst. To them both, in equal measure, I express my immutable gratitude, admiration and respect. I also acknowledge the support and encouragement of Dr. Robert Barclay, a recent acquaintance and man of quiet integrity.

Finally, and inevitably, I thank Newfoundland and her people. It is for them I toil.

Section 2A:
Temporal Patterns for
Selected Weather Variables.



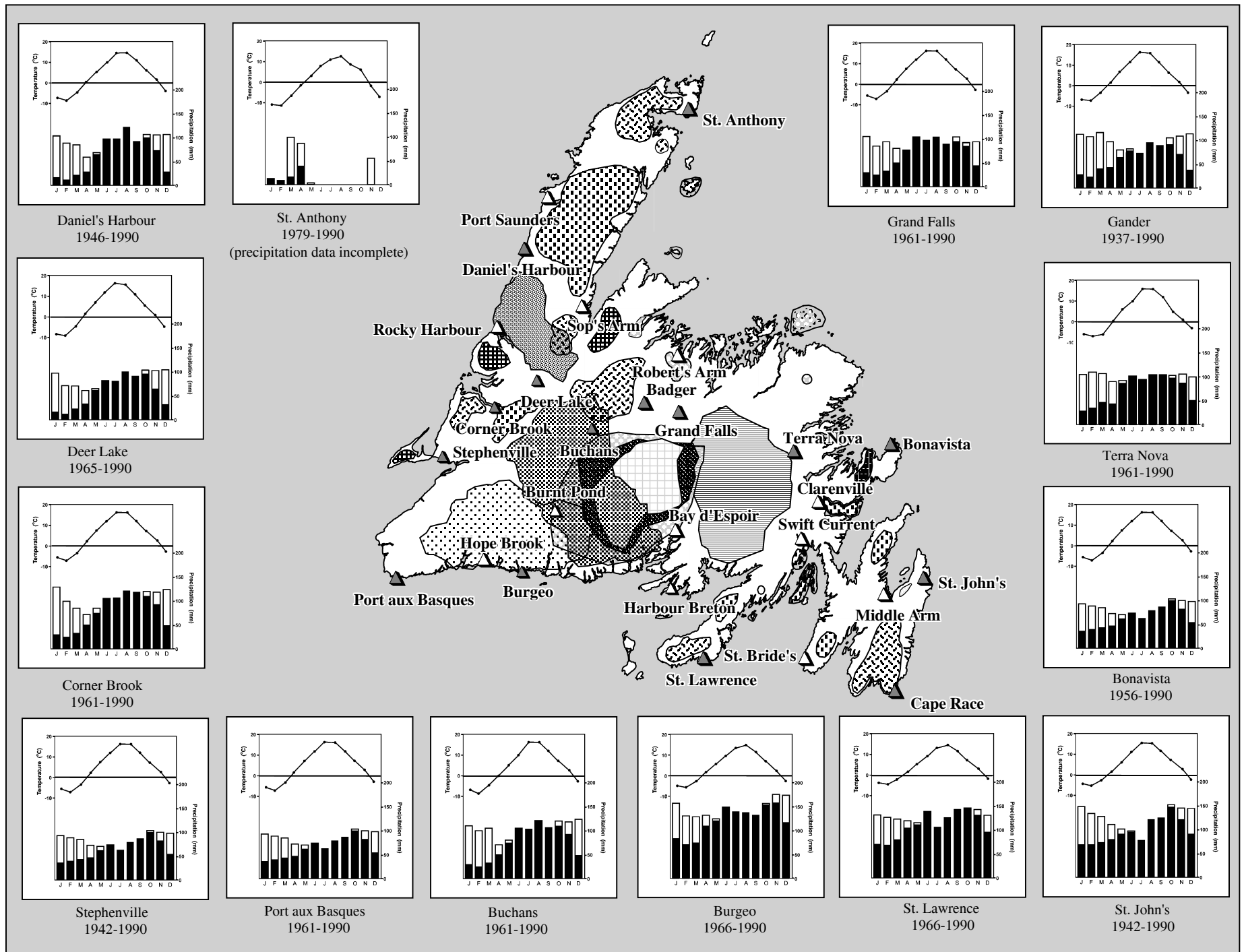


Fig. 2A-1. Insular Newfoundland climatological stations used for the determination of weather trends and climate normals (▲). Monthly precipitation normals (right axes, vertical bars) include snowfall equivalents (1/10) as unfilled portion of each bar. Mean monthly temperature normals (left axes) are shown as line graphs.

Table 2A-1a. Monthly maximum temperature (°C) for Badger.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1956	-	-	-	-	-	28.3	28.3	25.0	24.4	18.9	15.6	9.4
1957	9.4	1.7	10.0	12.8	20.0	26.7	28.3	27.2	22.8	21.1	12.2	13.9
1958	9.4	5.6	5.6	18.3	22.2	24.4	29.4	28.9	22.8	19.4	12.2	2.8
1959	6.1	7.8	3.9	14.4	22.8	25.6	31.1	27.2	28.9	15.0	15.6	12.8
1960	8.9	6.1	3.3	11.7	27.2	31.1	-	33.3	26.1	17.2	12.2	9.4
1961	0.0	0.6	8.9	11.7	23.3	29.4	31.7	31.7	27.2	20.0	15.0	6.1
1962	8.9	8.3	12.2	10.0	-	30.6	29.4	27.2	25.6	16.1	17.8	10.0
1963	10.6	2.8	12.2	15.0	-	27.8	32.8	25.6	22.8	-	-	-
1964	-	-	-	-	-	-	-	-	-	17.2	7.8	-
1965	-	-	-	10.6	20.6	27.2	27.2	-	27.2	-	11.7	7.8
1966	2.8	4.4	16.7	139.0	-	-	-	-	-	17.2	18.3	11.7
1967	5.0	6.1	7.8	6.7	-	-	-	-	-	-	-	-

Table 2A-1b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Badger.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1956	24	216.1	-	-	-	-	-
1957	13	137.1	3	10	61	13	8
1958	28	62.5	-	15	58	13	0
1959	10	97.6	36	0	30	-	-
1960	12	189.9	5	30	20	15	-
1961	10	-	-	38	-	117	-
1962	9	191.6	-	-	-	-	-
1963	14	172.4	-	-	-	-	-
1964	-	-	-	-	-	-	-
1965	-	-	-	-	-	-	-
1966	14	-	-	-	-	-	-
1967	11	186.0	-	-	-	-	-

Table 2A-1c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Badger.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1956	99	873.1	101
1957	99	1144.8	143
1958	103	1140.1	142
1959	96	1057.4	113
1960	113	-	141
1961	77	1349.8	150
1962	93	901.2	118
1963	101	916.4	98
1964	-	-	-
1965	85	-	105

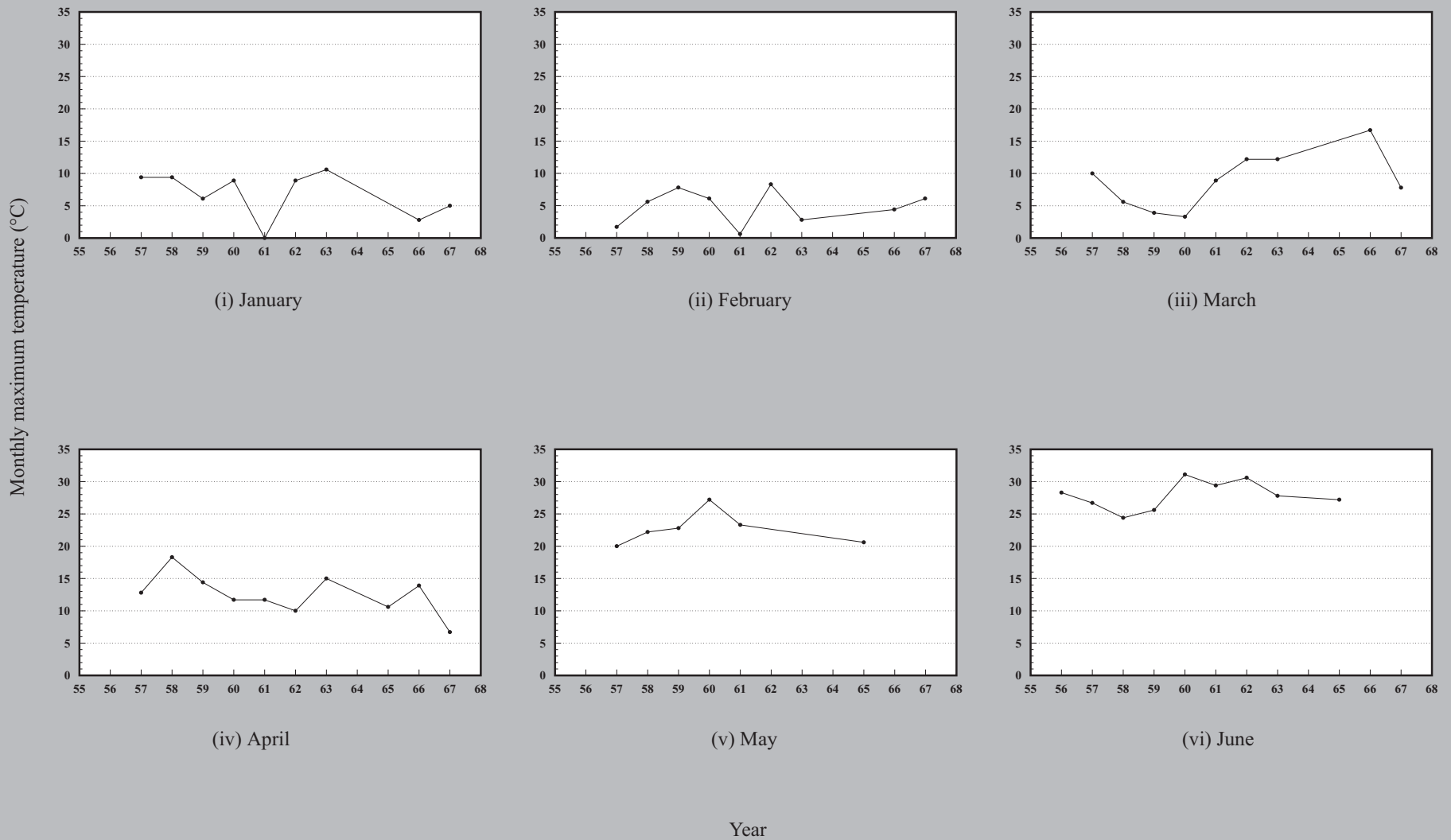
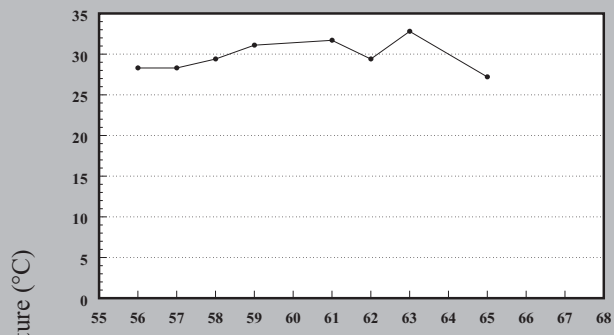
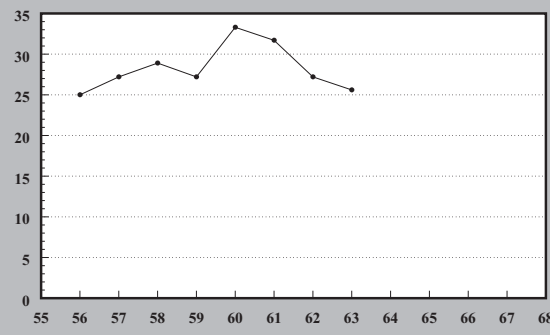


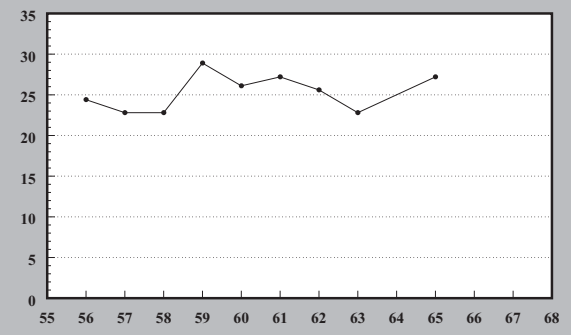
Fig. 2A-2a. Monthly maximum temperature (°C) for Badger, 1956 - 1967. (missing data may not allow estimation for some years)



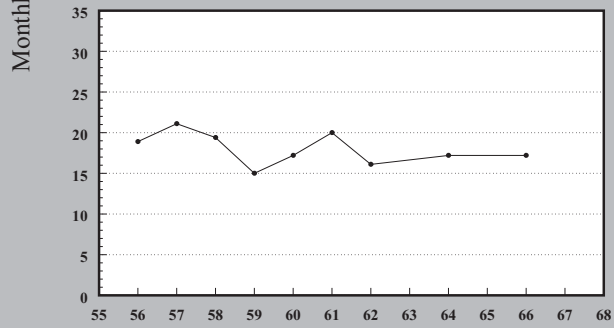
(vii) July



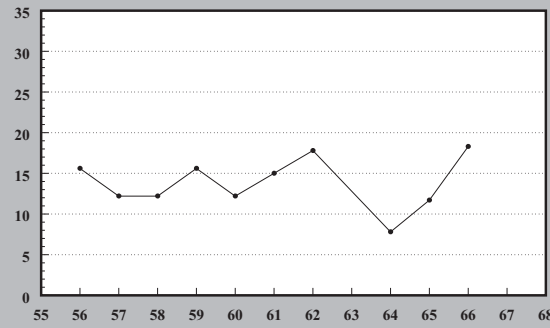
(viii) August



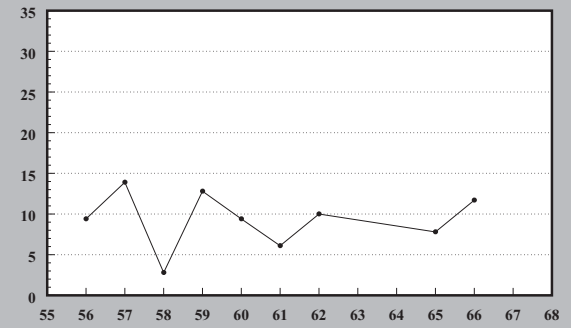
(ix) September



(x) October



(xi) November



(xii) December

Year

Fig. 2A-2a (con'd). Monthly maximum temperature (°C) for Badger, 1956 - 1967. (missing data may not allow estimation for some year)

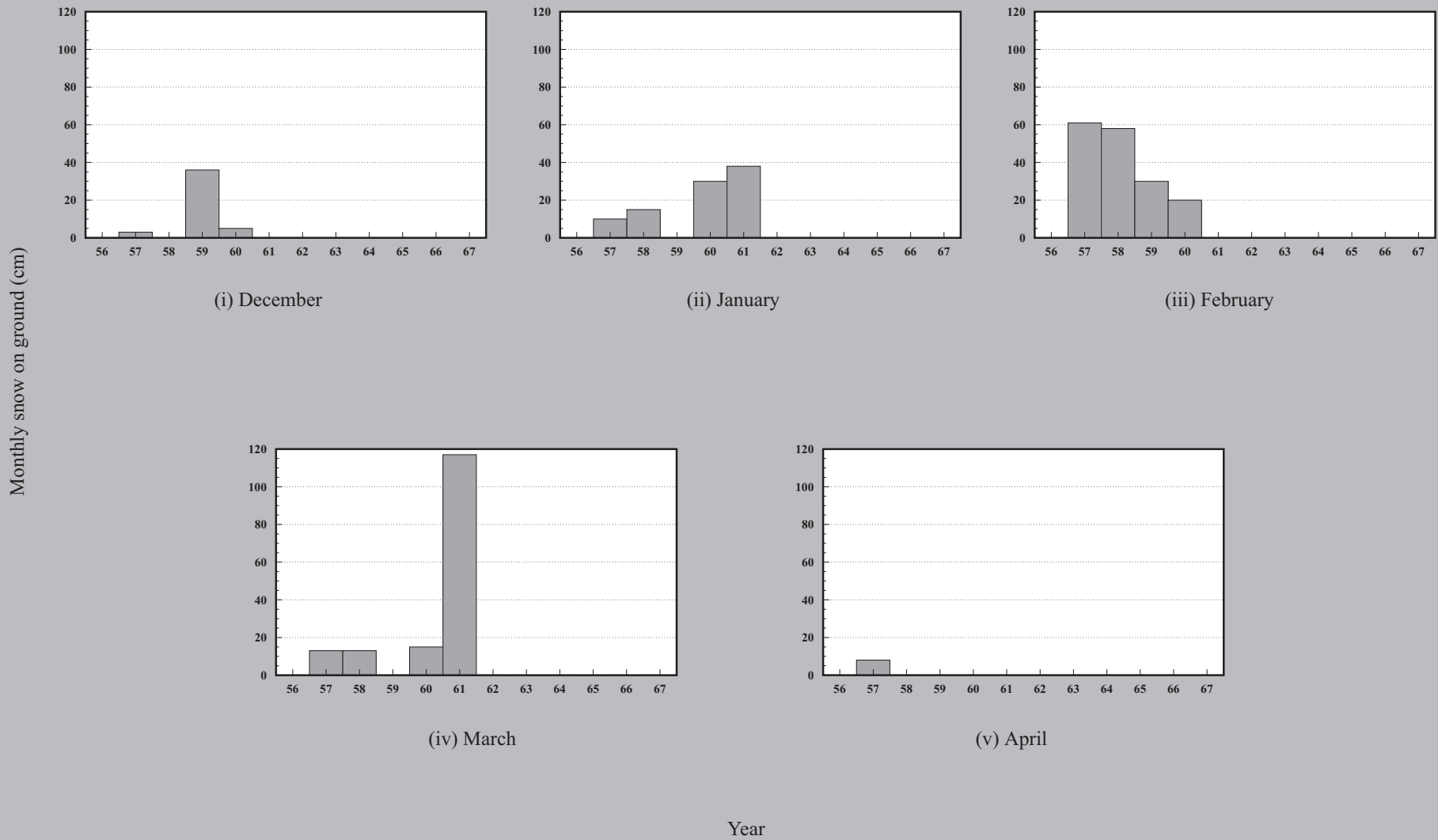
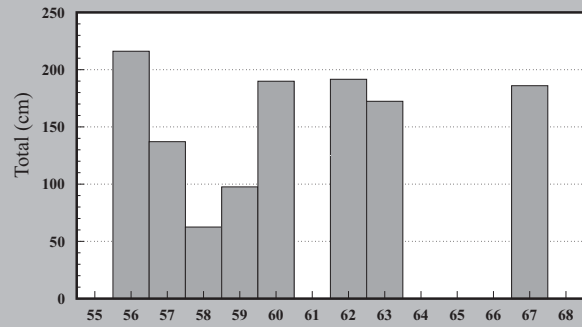
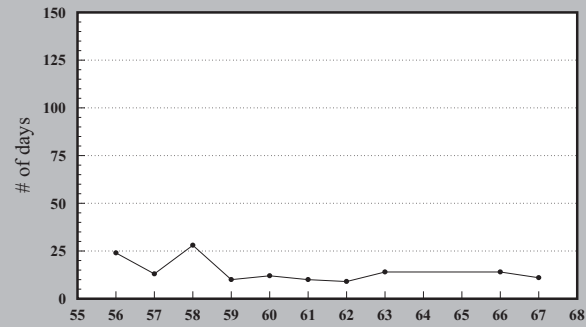


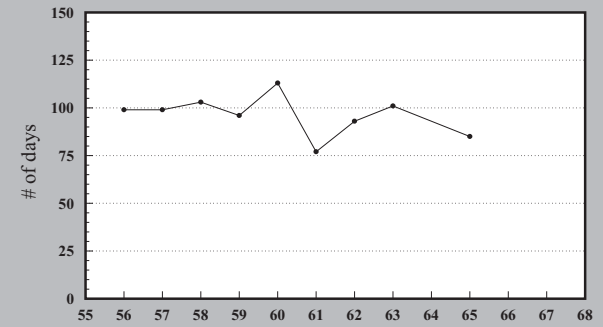
Fig. 2A-2b. Snow depth (cm) on ground on the last day of the month for Badger 1957-1967. (missing data may not allow estimation for some years)



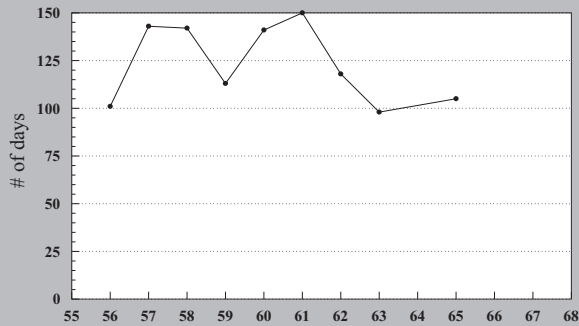
c. Snowfall



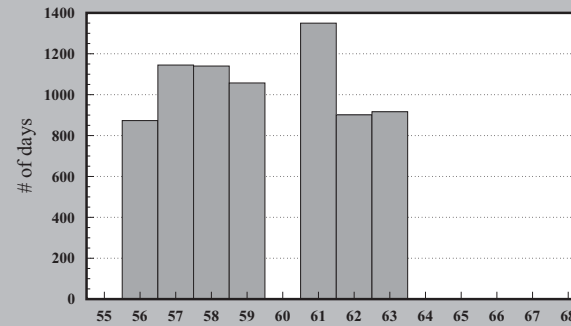
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-2c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Badger, 1956 - 1967. (missing data may not allow estimation for some years)

Table 2A-2a. Monthly maximum temperature (°C) for Bay d’Espoir.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1968	-	10.6	11.1	16.1	21.7	22.8	27.2	26.7	26.7	17.8	12.8	9.4
1969	7.8	8.9	10.0	11.7	17.2	25.6	28.3	28.9	22.8	18.3	16.1	16.1
1970	2.2	11.1	9.4	12.8	-	25.6	29.4	28.9	20.6	20.6	16.1	10.6
1971	6.1	8.9	8.9	14.4	21.7	26.7	27.2	28.9	22.8	18.9	15.6	6.7
1972	6.7	7.2	10.6	10.6	22.2	24.4	30.0	26.1	23.9	18.9	13.9	12.8
1973	7.2	10.6	9.4	12.2	21.7	26.7	26.7	25.6	25.6	20.0	13.3	12.2
1974	5.6	7.2	7.2	13.9	16.1	30.0	25.0	27.2	23.9	18.9	11.7	11.7
1975	3.9	3.3	13.3	12.2	21.7	23.3	30.6	27.8	20.6	16.1	13.3	11.7
1976	10.6	11.7	10.6	15.0	25.0	30.6	26.1	28.3	24.4	23.9	15.6	11.1
1977	8.9	8.9	11.1	16.7	25.0	29.4	27.2	28.3	25.0	18.3	17.2	13.3
1978	10.0	5.6	8.3	10.6	21.7	25.6	28.3	28.9	21.7	16.1	10.0	7.8
1979	10.6	6.7	13.3	22.2	25.0	27.0	29.5	29.5	24.5	19.5	15.0	11.0
1980	4.5	5.0	6.5	18.5	19.0	26.5	26.0	27.5	25.5	18.5	13.5	7.5
1981	9.5	11.0	9.5	14.0	20.0	24.5	32.0	28.5	26.5	18.5	15.5	12.0
1982	5.5	7.5	8.0	14.5	21.0	23.0	27.5	26.0	25.0	15.5	15.5	8.5
1983	12.0	8.0	11.0	19.0	22.0	27.5	26.0	26.0	24.0	19.0	14.5	9.0
1984	10.0	12.5	11.0	18.0	22.0	21.5	27.5	28.0	27.0	15.5	14.0	14.0
1985	4.0	6.0	6.5	11.5	21.0	25.5	28.5	28.0	24.0	18.0	11.0	10.0
1986	12.0	6.0	8.0	22.0	29.0	23.5	27.0	27.5	22.0	15.5	10.0	4.5
1987	4.0	4.0	8.5	16.0	22.5	23.0	31.0	27.5	21.5	24.0	15.0	11.5
1988	6.0	10.0	13.0	14.5	25.0	23.5	26.5	29.0	24.0	19.5	13.0	6.0
1989	6.0	7.0	6.5	12.0	23.0	26.5	26.5	29.0	28.5	16.5	17.0	4.5
1990	11.5	6.0	6.5	15.0	21.0	25.0	30.5	32.0	24.0	22.5	14.5	11.5
1991	3.0	11.5	7.5	18.0	18.0	26.0	29.0	27.0	24.0	20.0	16.0	9.0
1992	10.0	5.0	10.0	13.0	25.0	26.0	26.5	27.0	25.0	18.0	14.5	10.5
1993	9.0	9.0	12.0	13.5	20.0	26.0	26.0	24.5	24.5	18.0	13.0	13.0
1994	7.0	4.0	9.5	14.0	17.5	24.0	28.5	27.0	23.0	20.0	15.5	5.0
1995	7.0	9.0	9.5	14.0	20.0	32.0	29.0	32.0	25.0	19.0	16.0	7.0
1996	12.5	12.0	12.0	18.5	19.5	24.0	27.5	33.5	-	18.5	17.0	13.5
1997	10.0	5.5	5.5	10.0	-	-	-	-	-	-	-	-

Table 2A-2b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Bay d'Espoir.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1968	35	193.9	0	-	41	8	0
1969	35	159.4	-	-	-	0	0
1970	33	244.3	10	-	-	3	-
1971	41	250.7	-	15	-	5	0
1972	28	293.0	43	33	30	3	0
1973	20	295.2	-	33	66	38	-
1974	30	187.7	10	30	13	20	-
1975	27	247.7	10	64	84	46	0
1976	36	230.3	5	0	15	3	0
1977	28	191.2	5	7	22	5	0
1978	24	297.3	10	10	25	0	0
1979	34	184.0	0	0	0	0	0
1980	24	248.3	0	0	0	0	0
1981	41	185.0	16	10	0	-	0
1982	28	321.4	0	84	90	36	0
1983	51	204.3	6	10	59	1	0
1984	46	238.1	-	14	0	12	0
1985	21	240.5	25	33	50	41	0
1986	37	295.8	-	0	55	70	0
1987	34	201.7	28	70	31	0	0
1988	31	283.7	28	32	30	30	-
1989	23	402.4	-	79	50	110	0
1990	33	262.7	-	-	55	-	0
1991	29	228.9	-	50	-	5	1
1992	32	245.5	22	-	-	10	0
1993	30	302.4	58	-	-	-	0
1994	24	382.0	34	42	110	34	0
1995	25	387.4	-	-	-	-	-
1996	48	153.9	-	2	2	-	0
1997	26	343.8	-	-	-	-	-

Table 2A-2c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Bay d'Espoir.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1968	129	1087.6	135
1969	114	1133.9	137
1970	106	1079.6	110
1971	111	1090.3	139
1972	124	1122.5	124
1973	105	1151.1	147
1974	100	1094.0	129
1975	96	1241.4	133
1976	96	1146.8	121
1977	115	1191.3	141
1978	111	1147.3	145
1979	146	1308.7	145
1980	109	998.1	118
1981	128	1326.1	158
1982	114	1061.7	131
1983	93	1210.9	131
1984	97	1131.9	122
1985	101	1239.2	148
1986	93	978.7	119
1987	103	1183.4	145
1988	95	1097.5	127
1989	100	1317.1	136
1990	89	1239.8	138
1991	128	1111.9	144
1992	125	1225.3	151
1993	102	1162.9	146
1994	109	1279.7	137
1995	73	1218.0	155
1996	-	1206.3	137

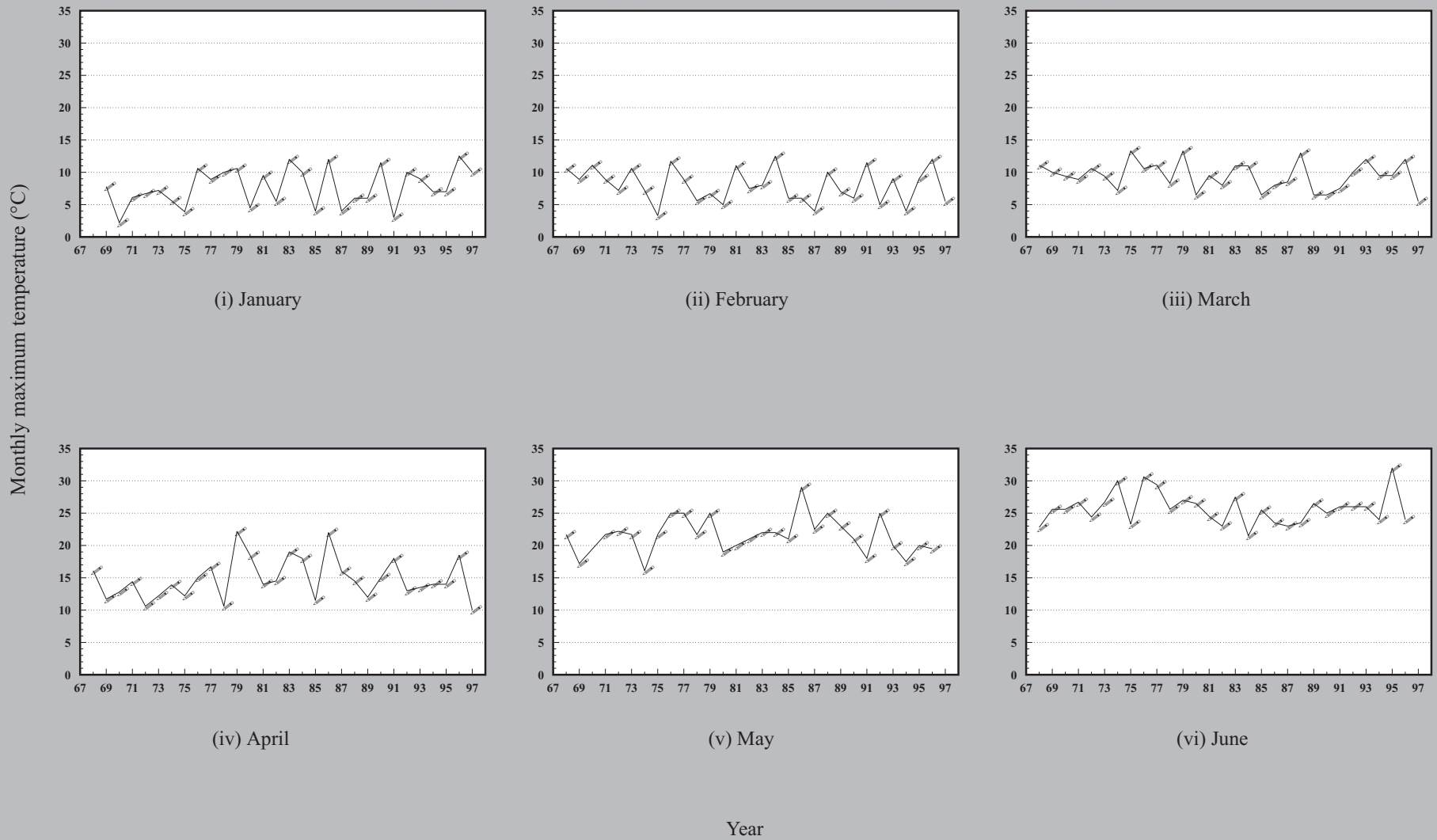


Fig. 2A-3a. Monthly maximum temperature (°C) for Bay d'Espoir, 1968 - 1997. (missing data may not allow estimation for some years)

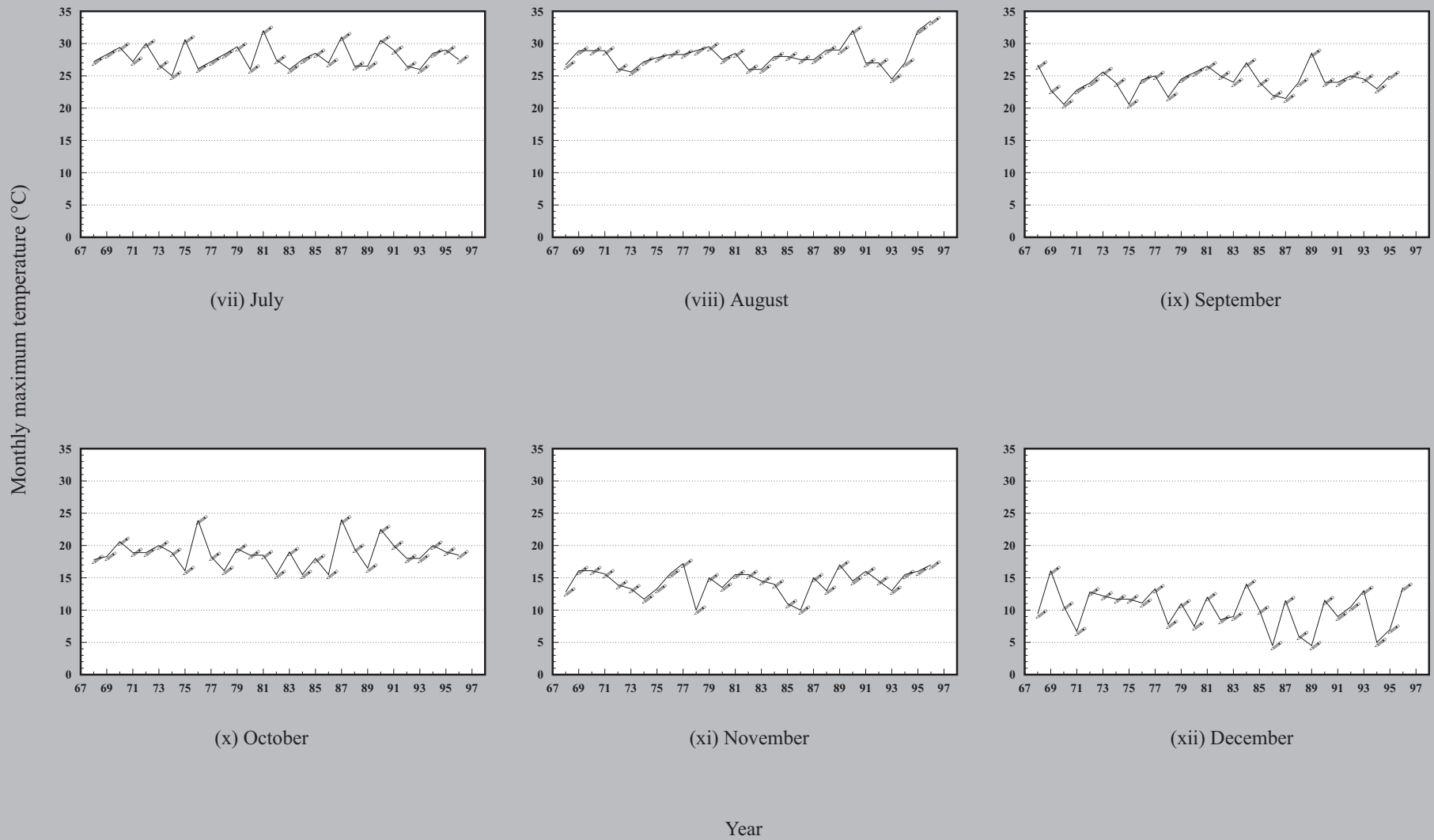


Fig. 2A-3a (con'd). Monthly maximum temperature (°C) for Bay d'Espoir, 1968 - 1997. (missing data may not allow estimation for some years)

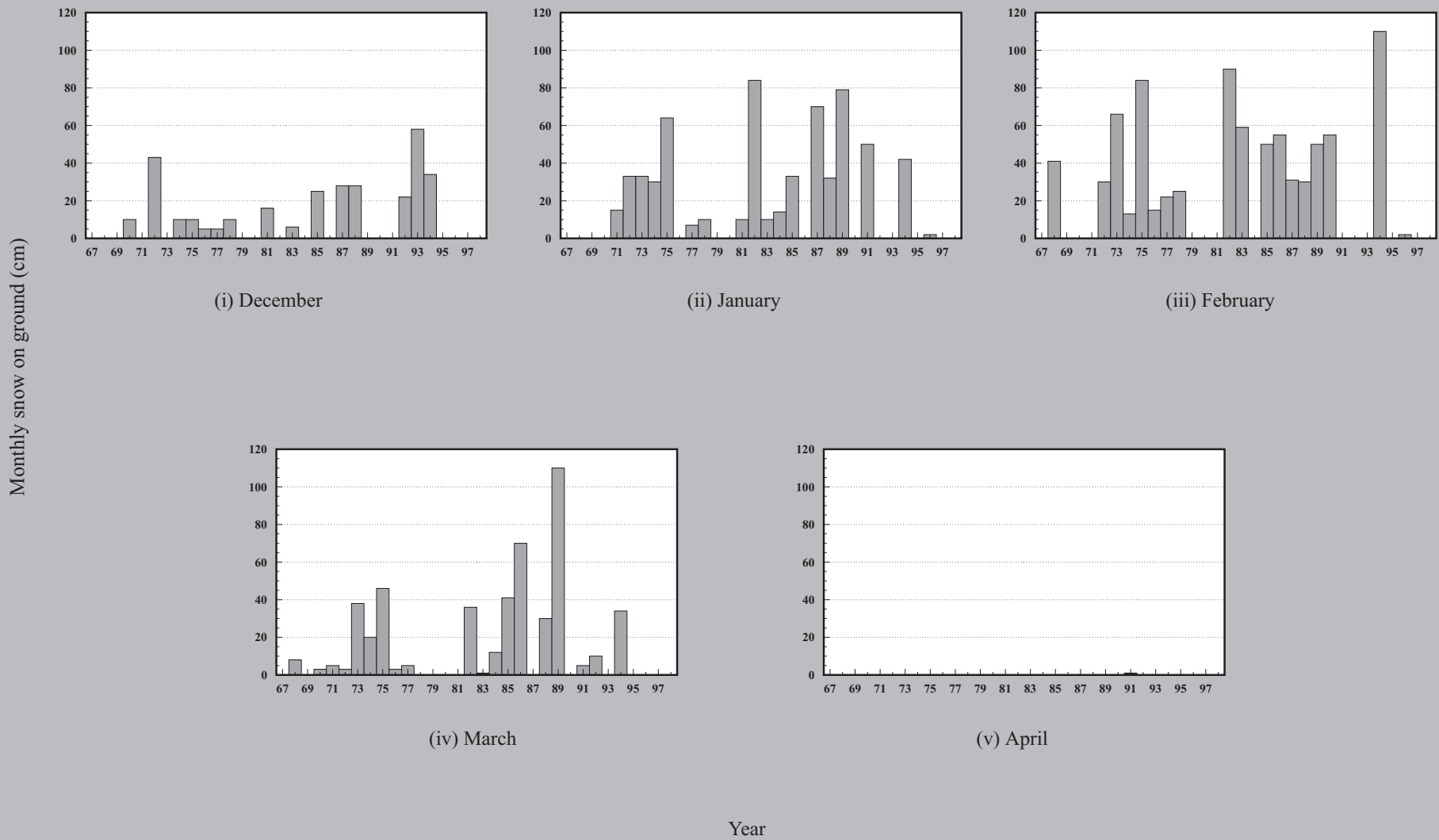
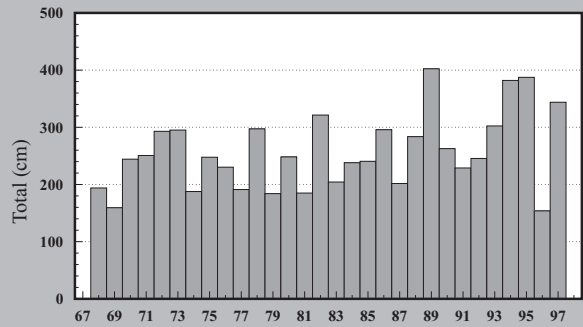
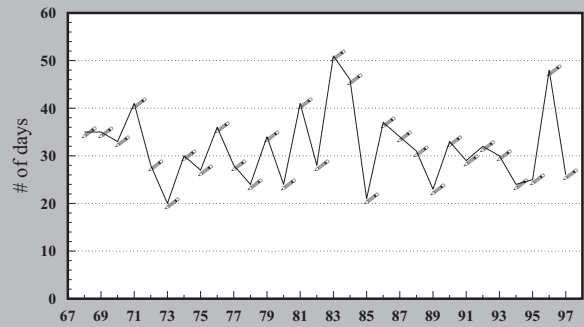


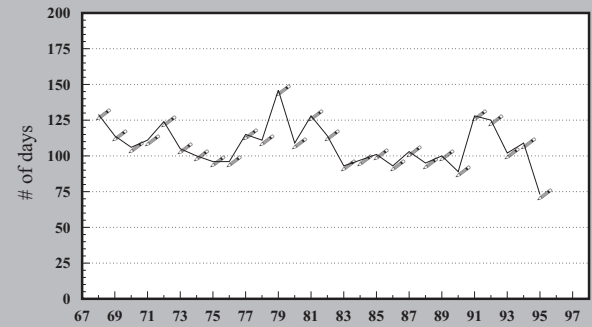
Fig. 2A-3b. Snow depth (cm) on ground on the last day of the month for Bay d'Espoir, 1968-1997. (missing data may not allow estimation for some years)



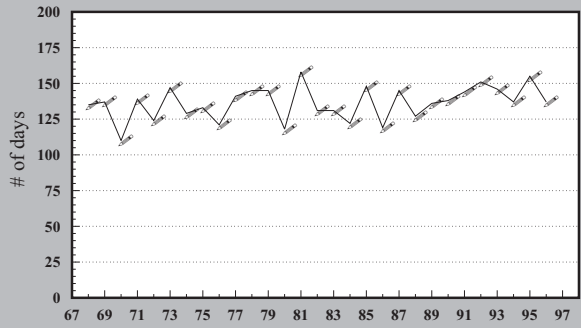
c. Snowfall



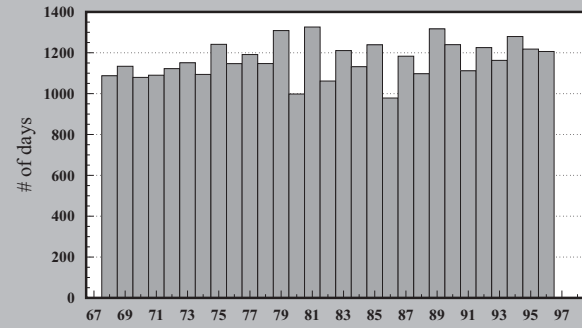
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-3c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Bay d'Espoir, 1968 - 1997. (missing data may not allow estimation for some years)

Table 2A-3a. Monthly maximum temperature (°C) for Bonavista.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1957	7.8	2.2	3.9	10.0	13.3	27.2	26.1	26.7	22.8	17.2	14.4	14.4
1958	5.6	4.4	2.2	17.2	19.4	21.1	23.9	26.7	23.3	16.7	9.4	4.4
1959	3.9	5.0	3.3	8.3	16.7	19.4	28.3	26.7	22.2	13.9	-	11.7
1960	6.1	2.2	3.3	12.8	23.9	28.3	26.1	26.1	25.0	16.1	12.2	12.2
1961	3.3	1.1	3.9	5.6	21.7	26.7	29.4	28.3	24.4	20.6	14.4	6.7
1962	6.7	8.9	12.8	12.2	18.9	27.8	24.4	26.7	26.1	15.6	17.2	12.2
1963	12.2	3.3	10.0	15.6	21.1	25.6	29.4	25.6	22.2	16.7	15.0	13.9
1964	6.7	4.4	5.6	15.0	20.0	20.0	26.7	22.2	23.9	16.7	10.0	8.9
1965	6.7	3.9	3.3	10.0	14.4	23.9	28.3	27.8	24.4	16.7	12.2	7.2
1966	2.8	3.3	6.7	11.7	20.6	23.9	26.7	26.7	21.7	16.7	15.0	13.3
1967	7.8	7.2	5.6	3.9	15.0	28.3	28.9	27.2	23.9	22.8	17.8	11.1
1968	7.2	5.0	11.7	15.0	21.1	21.7	30.6	26.7	20.0	20.0	10.6	7.2
1969	4.4	3.3	8.3	13.9	18.9	25.6	26.7	24.4	20.6	17.8	16.7	12.8
1970	2.2	8.9	6.1	11.1	21.7	24.4	28.9	28.9	22.8	19.4	15.0	8.9
1971	7.2	8.9	7.2	15.0	23.3	26.1	27.8	29.4	22.2	16.7	15.0	11.1
1972	7.8	6.7	11.1	10.6	21.1	26.1	26.7	25.6	18.3	21.7	11.7	12.8
1973	6.1	9.4	6.7	13.3	16.7	25.0	28.9	26.7	21.7	16.7	12.2	13.9
1974	4.4	6.1	6.1	10.6	12.8	26.7	26.1	26.7	22.8	16.1	10.0	10.0
1975	2.8	2.2	8.9	7.8	20.0	21.7	30.0	28.3	23.3	17.2	13.1	10.6
1976	12.2	10.6	9.4	11.1	23.3	26.7	27.8	30.0	21.7	20.6	16.7	8.9
1977	4.6	4.9	5.8	11.4	18.1	28.8	25.1	26.7	20.6	19.2	15.9	9.0
1978	10.7	2.2	8.9	13.1	21.4	27.1	26.8	29.2	21.5	19.2	10.8	5.9
1979	10.5	6.6	13.4	9.7	25.6	25.9	27.5	30.1	21.7	17.6	17.0	9.8
1980	2.8	6.8	5.3	10.4	19.1	27.0	27.2	23.5	21.3	16.4	11.0	9.1
1981	6.5	9.8	6.6	12.2	23.7	25.0	28.1	28.7	20.6	18.4	14.9	12.2
1982	5.4	5.4	9.9	17.8	16.4	17.7	27.5	26.2	23.3	17.1	15.5	8.3
1983	12.1	4.4	9.2	16.3	17.4	25.0	27.3	24.7	23.6	18.0	13.0	9.0
1984	10.2	11.1	12.2	8.0	21.1	21.0	27.0	26.7	23.9	14.6	15.0	12.2
1985	3.7	6.4	4.8	10.7	17.6	26.1	26.9	26.1	21.9	15.9	10.9	9.3

Table 2A-3a (con'd). Monthly maximum temperature (°C) for Bonavista.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1986	11.9	6.8	9.3	21.5	22.3	24.8	25.1	25.4	19.1	16.3	10.7	5.3
1987	4.9	3.7	7.8	11.7	19.7	23.1	28.5	25.7	19.5	20.5	14.7	9.6
1988	7.9	6.9	11.8	10.9	25.0	24.9	26.3	27.3	23.3	20.9	13.9	6.9
1989	7.2	8.8	8.4	12.4	20.7	25.1	26.3	26.3	24.6	18.4	16.8	5.3
1990	12.4	6.6	9.4	11.9	20.8	25.4	24.4	26.4	22.8	18.8	14.0	12.8
1991	4.9	11.2	8.1	10.1	17.3	21.9	26.5	27.0	21.4	18.3	14.8	8.1
1992	6.5	4.2	8.6	10.3	24.2	21.7	24.6	25.2	23.9	16.2	13.8	10.3
1993	8.5	8.0	9.8	16.2	20.3	26.4	24.1	25.9	22.1	17.2	14.1	12.3
1994	8.1	2.8	10.0	13.0	16.0	23.0	26.8	26.6	21.4	20.3	15.1	4.2
1995	8.4	7.5	9.6	13.0	19.1	21.4	24.9	28.7	21.6	18.5	11.6	6.2
1996	10.8	9.7	8.0	15.0	17.2	21.9	25.8	29.4	21.0	16.1	12.3	11.8
1997	5.7	5.4	5.9	-	-	-	-	-	-	-	-	-
Normal	-1.2	-2.0	-0.3	3.7	8.8	14.3	19.1	18.9	15.1	10.1	5.7	1.2

Table 2A-3b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Bonavista.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1957	18	229.9	-	-	25	25	-
1958	34	55.4	-	-	-	-	0
1959	8	228.1	25	-	-	-	-
1960	28	276.9	3	33	33	122	0
1961	13	248.1	3	36	94	84	15
1962	30	194.3	23	18	81	0	5
1963	30	251.0	23	3	15	3	0
1964	27	272.0	0	48	18	33	0
1965	36	280.6	13	13	41	46	0
1966	28	263.5	3	30	38	3	0
1967	31	235.4	0	23	51	38	13
1968	29	152.2	3	3	25	3	0
1969	38	184.1	0	15	0	0	0
1970	43	148.8	3	30	0	0	0
1971	38	143.1	33	20	0	0	0
1972	28	194.9	43	3	18	5	0
1973	31	189.7	5	18	13	15	0
1974	34	190.2	13	23	13	15	0
1975	30	181.1	0	64	71	28	0
1976	37	176.5	13	0	3	0	0
1977	22	164.0	0	5	35	7	0
1978	18	206.9	7	7	19	5	0
1979	40	103.3	4	0	14	0	0
1980	23	155.6	0	12	53	40	0
1981	32	152.5	24	31	2	5	0
1982	34	284.5	0	108	129	22	0
1983	49	224.0	10	19	63	0	0
1984	41	164.6	0	7	1	40	0
1985	26	236.8	19	31	45	24	0
1986	38	231.6	5	0	31	20	0
1987	38	247.6	32	88	139	16	0
1988	45	244.6	46	15	3	0	0
1989	28	335.8	24	51	37	54	0
1990	30	213.6	0	9	55	1	0
1991	34	290.4	51	82	67	7	1
1992	39	299.8	30	19	91	3	0
1993	38	238.0	23	13	18	7	0
1994	38	268.8	30	5	71	25	0
1995	39	369.8	8	109	109	13	0
1996	46	230.6	0	4	3	0	0
1997	27	202.5	-	8	33	-	-
Normal	32	208.2	12	24	37	17	2

Table 2A-3c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Bonavista.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1957	159	925.1	109
1958	171	1024.7	139
1959	131	798.7	93
1960	178	1220.9	147
1961	164	1177.9	129
1962	141	689.7	102
1963	161	880.5	114
1964	164	858.5	130
1965	158	974.7	105
1966	165	1003.0	120
1967	159	1213.3	113
1968	151	734.0	117
1969	158	958.3	121
1970	151	1082.1	141
1971	146	1155.5	139
1972	147	888.0	114
1973	143	1029.7	126
1974	132	769.2	111
1975	143	943.5	91
1976	153	967.9	107
1977	163	943.1	112
1978	140	968.5	119
1979	172	1217.1	157
1980	171	842.2	130
1981	173	998.6	134
1982	123	874.0	100
1983	143	1029.8	123
1984	119	990.8	103
1985	135	1005.6	132
1986	148	859.2	108
1987	142	1035.8	130
1988	174	1098.3	133
1989	161	1135.3	122
1990	141	1086.3	120
1991	143	761.9	111
1992	160	772.7	109
1993	160	754.7	106
1994	147	1158.4	126
1995	156	-	149
1996	164	-	134
1997	-	-	133
Normal	-	1131.0	-

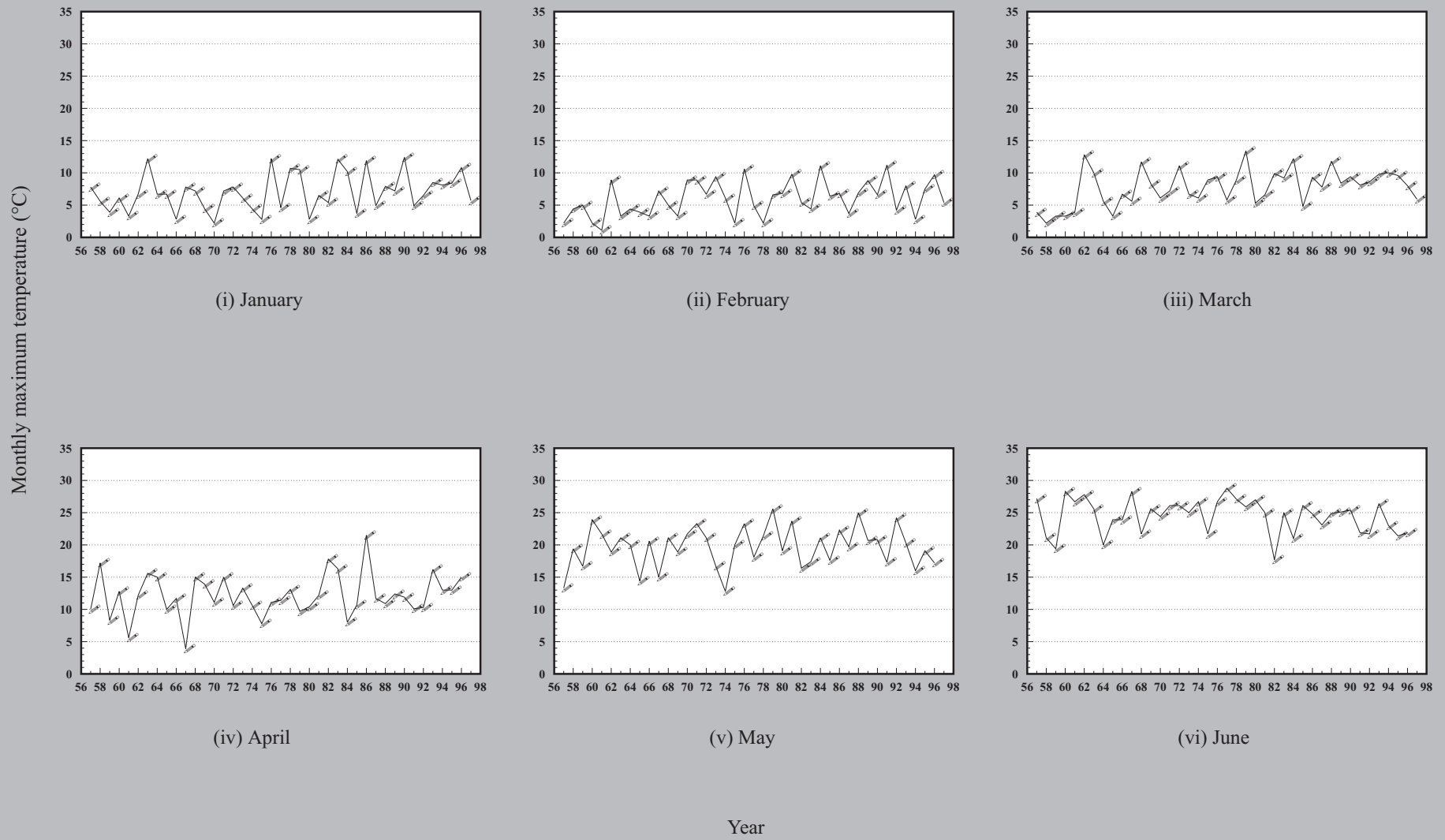


Fig. 2A-4a. Monthly maximum temperature (°C) for Bonavista, 1957 - 1997. (missing data may not allow estimation for some years)

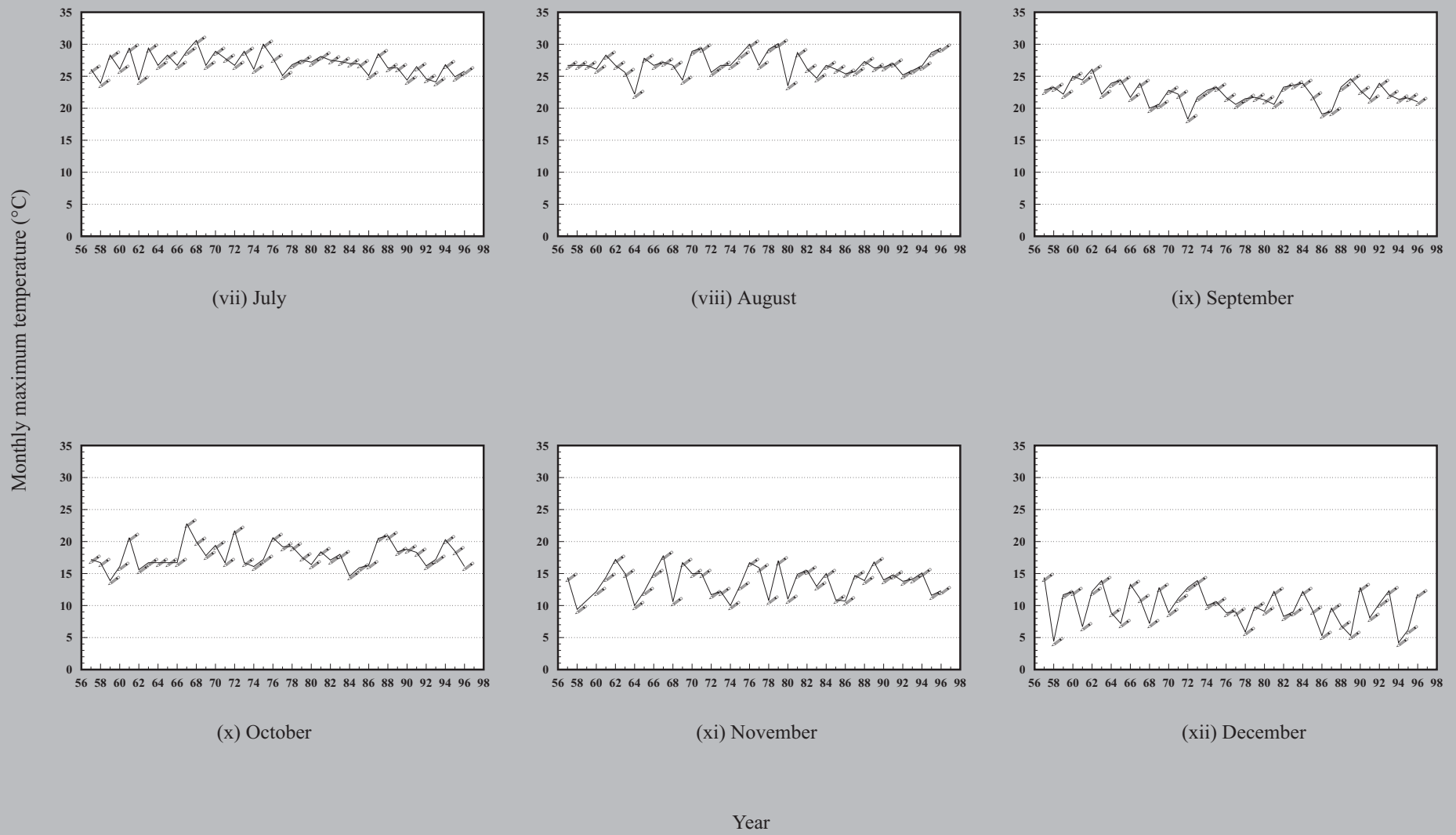


Fig. 2A-4a (con'd). Monthly maximum temperature (°C) for Bonavista, 1957 - 1997. (missing data may not allow estimation for some years)

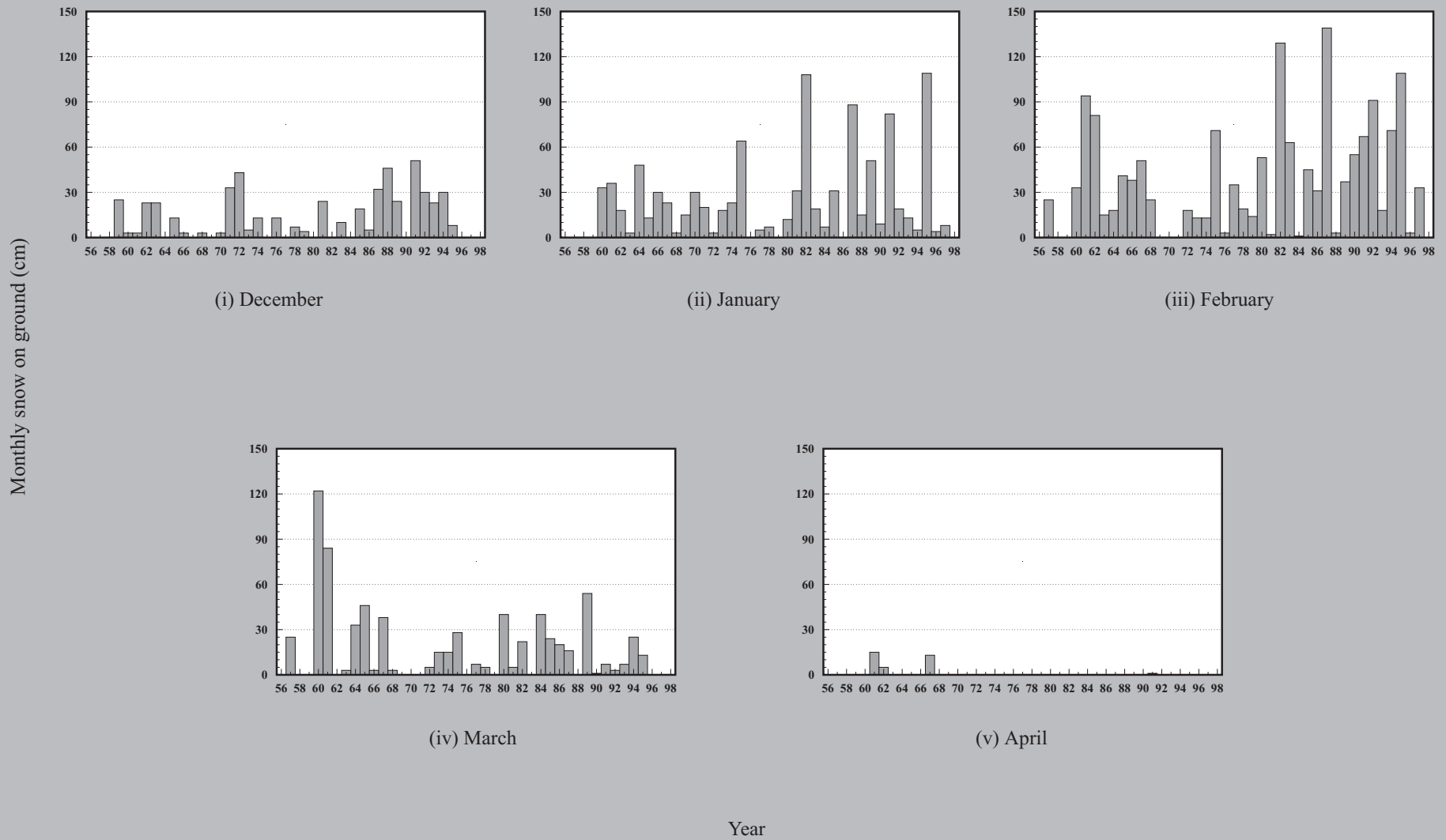
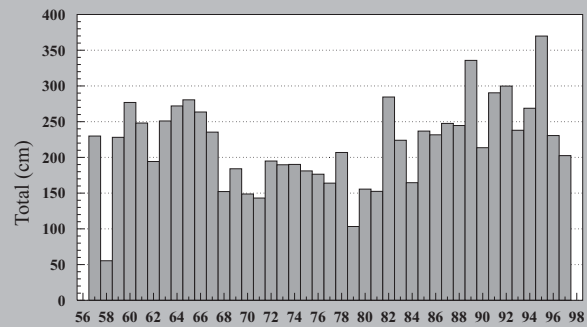
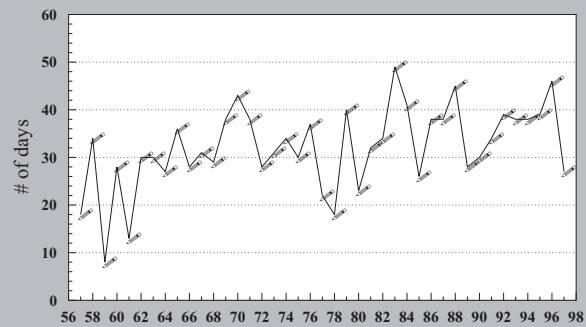


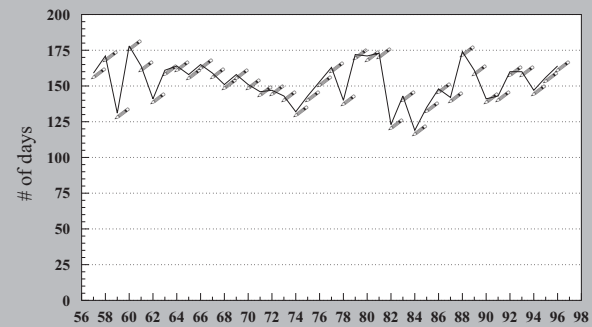
Fig. 2A-4b. Snow depth (cm) on ground on the last day of the month for Bonavista, 1957-1997. (missing data may not allow estimation for some years)



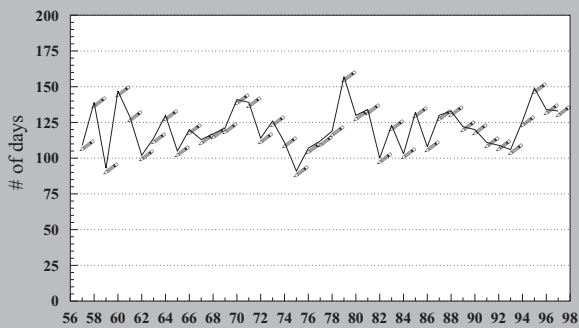
c. Snowfall



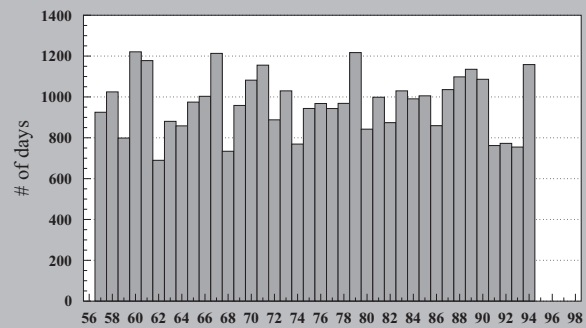
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-4c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Bonavista, 1957 - 1997. (missing data may not allow estimation for some years)

Table 2A-4a. Monthly maximum temperature (°C) for Buchans.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1937	5	3.3	3.9	11.7	21.7	30	30.6	31.7	26.7	18.3	13.3	-
1938	-	1.1	6.7	13.3	20	27.8	-	-	-	-	13.3	8.3
1939	2.8	7.8	3.3	8.9	18.3	27.8	31.1	27.2	26.1	17.8	16.1	6.7
1940	2.2	6.1	2.2	11.1	21.7	27.8	27.2	30.6	21.7	17.8	9.4	5
1941	3.3	3.3	6.1	-	16.7	26.7	30.6	22.8	18.3	12.2	7.2	3.3
1942	5.6	7.2	7.8	19.4	21.7	26.7	30	27.8	27.2	18.9	18.3	3.3
1943	0.6	6.7	5	13.3	15.6	20.6	31.7	28.9	26.7	20	11.7	4.4
1944	0.6	4.4	5.6	6.1	22.2	30	28.3	30	22.8	15.6	15.6	6.1
1945	5	4.4	7.8	7.2	19.4	25	31.7	29.4	23.9	16.7	15.6	10.6
1946	3.9	7.8	9.4	12.2	-	26.1	27.8	29.4	23.3	20	8.9	6.7
1947	4.4	3.9	4.4	6.7	17.2	31.1	33.3	28.9	24.4	17.8	8.9	2.2
1948	6.7	4.4	3.9	11.1	23.3	27.2	29.4	-	28.3	18.9	14.4	5
1949	6.1	2.2	6.7	8.9	21.7	30.6	28.9	24.4	25.6	16.1	12.8	8.9
1950	6.7	2.8	5.6	9.4	25.6	26.7	26.7	27.2	22.2	19.4	16.7	9.4
1951	6.7	6.7	1.7	15.6	21.7	30.6	29.4	27.8	23.3	17.2	15	6.1
1952	6.7	4.4	2.8	10	20	23.9	34.4	30.6	23.9	18.3	11.7	8.3
1953	8.3	6.7	7.8	12.2	17.2	26.1	30.6	26.1	27.2	19.4	15	11.1
1954	5	6.7	7.8	15.6	19.4	31.1	25.6	21.1	20.6	16.1	15.6	11.1
1955	3.3	6.7	6.1	8.9	19.4	28.3	30	26.1	23.9	15.6	8.3	1.1
1956	7.2	4.4	3.9	10	16.7	26.7	26.7	24.4	22.2	17.8	13.3	7.2
1957	5	1.7	3.9	8.3	15.6	25.6	26.1	25.6	21.1	20	12.2	11.7
1958	8.3	3.9	5	14.4	20.6	21.1	26.7	26.7	21.1	17.8	11.7	1.7
1959	5	6.1	1.7	11.7	22.2	25	30	25.6	27.8	13.9	13.9	10
1960	7.8	5	1.1	10	26.7	28.3	28.3	28.3	25	16.7	10.6	7.8
1961	-1.1	-0.6	4.4	6.7	21.7	27.8	30.6	27.8	25	18.3	12.2	6.1
1962	4.4	6.7	8.9	7.2	18.9	31.7	26.1	25.6	23.9	15.6	17.2	8.9
1963	7.2	1.7	8.3	11.7	24.4	26.7	30.6	23.9	22.2	19.4	13.9	10
1964	5	2.8	6.7	8.3	27.2	22.8	28.9	23.9	21.1	15	6.1	6.7
1965	2.2	3.9	4.4	7.2	17.2	26.7	-	-	-	-	-	-
1966	1.1	3.9	0.6	10.6	21.7	25	26.1	27.2	22.8	16.1	-	11.1
1967	3.3	1.7	2.2	5.6	14.4	31.1	-	-	-	-	-	-

Table 2A-4a (con'd). Monthly maximum temperature (°C) for Buchans.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1968	-	-	-	-	22.8	20.6	29.4	26.7	26.1	18.9	7.8	5.6
1969	5	5.6	5.6	10.6	16.1	29.4	27.8	26.1	24.4	17.8	15	12.8
1970	1.7	8.9	5	8.9	17.8	27.2	29.4	30	20.6	20.6	15	5.6
1971	3.9	7.8	7.2	12.8	24.4	28.3	27.8	28.3	23.3	17.8	12.8	3.9
1972	5	4.4	8.9	7.2	26.1	27.2	30	26.1	28.3	17.8	11.7	7.8
1973	6.7	5.6	7.2	-	-	-	-	-	-	16.7	10	12.8
1974	3.3	5	4.4	8.9	13.3	30.6	26.7	26.7	23.3	16.7	9.4	7.8
1975	1.7	3.9	10.6	9.4	18.9	31.7	30.6	27.8	21.1	17.2	14.4	10
1976	8.9	10	10.6	11.1	22.2	28.9	31.1	31.7	22.8	21.7	14.4	8.9
1977	7.8	6.1	8.3	16.1	25	25.6	28.3	27.2	21.7	17.8	15.6	9.4
1978	8.3	2.8	5.6	7.8	21.7	26.1	29.4	27.8	19.4	17.2	9.4	7.2
1979	10.6	6.7	13.3	20.6	25.6	27.2	30	29.4	21.5	16.5	14	9
1980	3	1	4	16	17.5	26	28	24.5	20	17.5	9	4.5
1981	8	9	5.5	11.5	19.5	24.5	29	27.5	24.5	17	14.5	10
1982	2	5	7	14	20	23	30.5	27	26	16	15	8.5
1983	10	4.5	9.5	17	18.5	26.5	33	28.5	22.5	20	13	6
1984	3.5	5.5	9.5	14	20.5	21	27	28.5	23.5	11.5	14.5	-
1985	1	5	4	11	23	27	30	30	24	14.5	8.5	7.5
1986	9.5	3	7	18	26	23	26	26	20	17	10	5
1987	1	2	9	16.5	20	22.5	29.5	27	22.5	20.5	13	5.5
1988	3.5	6	11	12	23.5	31	29.5	29.5	22	19.5	11.5	3
1989	5	5	7	9.5	21	28	29.5	27	25.5	14.5	15.5	2
1990	6.5	3.5	9	11	23	28.5	26.5	28.5	22.5	20	11	9.5
1991	1.5	7	6	10.5	18.5	26.5	29.5	29	22.5	17	13.5	5
1992	6	2	8	10.5	25	24	27	27	24.5	16.5	11.5	7.5
1993	2.5	6	10.5	11.5	22.5	29	25	28.5	23.5	15	12	9.5
1994	6.5	3.5	5.5	11	16.5	27.5	27	27.5	21.5	22.5	14.5	4
1995	8	6	7	9.5	17	29	30.5	32	22.5	22	14.5	3.5
1996	8.5	10	9	17.5	17	26	26	31.5	27.5	17	15	11
1997	7	3	3.5	7.5	15.5	26	28.5	28	21.5	16.5	12	4
1998	6	5.5	7	16	23.5	-	-	-	-	-	-	-
Normal	-4.4	-4.8	-1	4	11	17.3	21.2	20.1	14.8	8.6	3	-2

Table 2A-4b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Buchans.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1937	15	238.4	-	-	-	-	-
1938	16	44.4	-	-	-	-	-
1939	11	74.7	-	-	-	-	-
1940	9	228	-	-	-	-	-
1941	15	176	-	-	-	-	-
1942	17	279.1	-	-	-	-	-
1943	14	342.2	-	-	-	-	-
1944	14	257.9	-	-	-	-	-
1945	24	117.1	-	-	-	-	-
1946	21	283.7	-	-	-	-	-
1947	6	256.8	74	97	109	119	-
1948	10	254.3	53	79	-	97	64
1949	16	270.1	-	41	-	-	-
1950	12	94.8	23	18	114	102	-
1951	28	241.9	41	15	5	-	-
1952	14	120.6	20	61	104	124	20
1953	36	228.6	30	13	20	3	-
1954	11	203.5	25	-	25	38	-
1955	16	298.2	81	36	3	30	0
1956	14	296.4	41	18	94	168	-
1957	10	165.4	-	58	71	33	5
1958	30	277.6	41	-	46	-	0
1959	10	272.8	8	58	66	76	-
1960	11	303.5	18	36	20	86	8
1961	6	379.9	5	69	102	79	20
1962	16	453.8	114	51	165	13	20
1963	18	436.6	38	18	150	84	5
1964	13	462	13	51	86	74	5
1965	17	229.6	-	64	107	66	20
1966	13	331.4	-	-	36	-	-
1967	3	-	-	-	91	-	-
1968	-	235.4	20	-	-	-	-
1969	23	192.6	0	30	0	-	-
1970	25	228.3	36	38	41	8	0
1971	28	241.5	94	94	18	18	0
1972	21	266	64	109	71	13	0
1973	17	282.4	8	64	107	-	-
1974	20	292.7	38	-	58	84	41
1975	16	313.7	20	124	152	132	0

Table 11A-4b (con'd). Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Buchans.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1976	23	202.2	30	5	64	0	0
1977	21	273.1	7	20	30	2	0
1978	19	176	0	33	12	5	0
1979	33	114.2	5	0	5	0	0
1980	13	167	40	40	68	40	0
1981	30	304	35	39	0	15	0
1982	20	190.8	-	162	207	50	0
1983	28	301.3	15	27	47	8	0
1984	13	256	0	108	36	73	-
1985	10	316	50	68	92	64	-
1986	19	289	54	8	68	28	0
1987	20	388	63	120	116	15	0
1988	16	346	60	80	105	50	-
1989	13	377	88	121	95	58	0
1990	18	311	5	66	98	72	5
1991	12	270	48	64	72	36	21
1992	11	262	40	20	96	50	-
1993	17	349	48	68	34	55	-
1994	19	515	102	53	81	49	0
1995	13	273	37	128	80	40	10
1996	22	279	-	14	8	0	0
1997	15	274	25	25	42	16	30
1998	27	-	-	39	5	-	-
Normal	-	-	35	65	67	33	2

Table 2A-4c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Buchans.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	90	956	123
1951	128	1051.2	117
1952	128	1211	131
1953	124	1037.3	121
1954	119	947.2	111
1955	127	915.2	104
1956	108	751.1	89
1957	109	828.1	99
1958	119	873.3	114
1959	109	911.8	94
1960	121	1151.3	133

Table 2A-4c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for Buchans.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1961	133	1169.4	140
1962	104	778.3	106
1963	93	747.3	88
1964	117	809.3	118
1965	95	948.1	113
1966	124	837.3	97
1967	-	-	-
1968	137	904.5	125
1969	113	946.2	97
1970	99	1034.9	110
1971	137	1056.2	122
1972	124	1014.5	113
1973	-	-	-
1974	122	959.4	108
1975	114	1170.2	117
1976	140	1182.6	113
1977	122	995.1	109
1978	119	982.9	108
1979	169	1281.2	145
1980	130	899.7	110
1981	144	1110.5	137
1982	120	921.4	110
1983	137	1031.8	126
1984	153	963.7	96
1985	145	1211	147
1986	126	964.5	122
1987	143	1055.8	136
1988	159	1046.7	118
1989	136	1094.2	106
1990	138	1206	129
1991	144	747.3	120
1992	135	1080.3	129
1993	147	881.2	103
1994	129	1234.1	129
1995	144	1082	124
1996	120	1161.3	119
1997	148	1174.4	117
Normal	-	1209	-

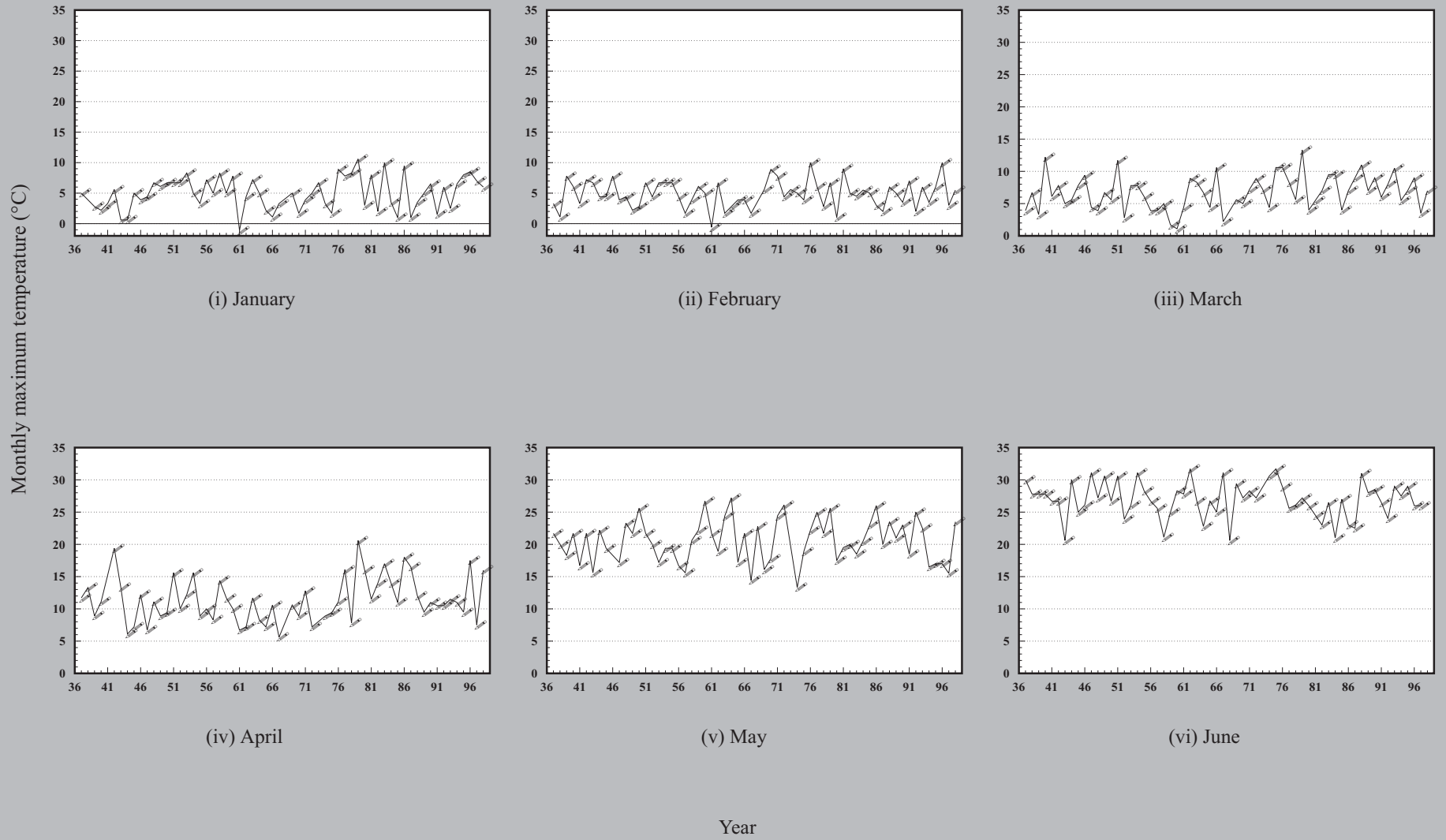


Fig. 2A-5a. Monthly maximum temperature (°C) for Buchans, 1937 - 1998. (missing data may not allow estimation for some years)

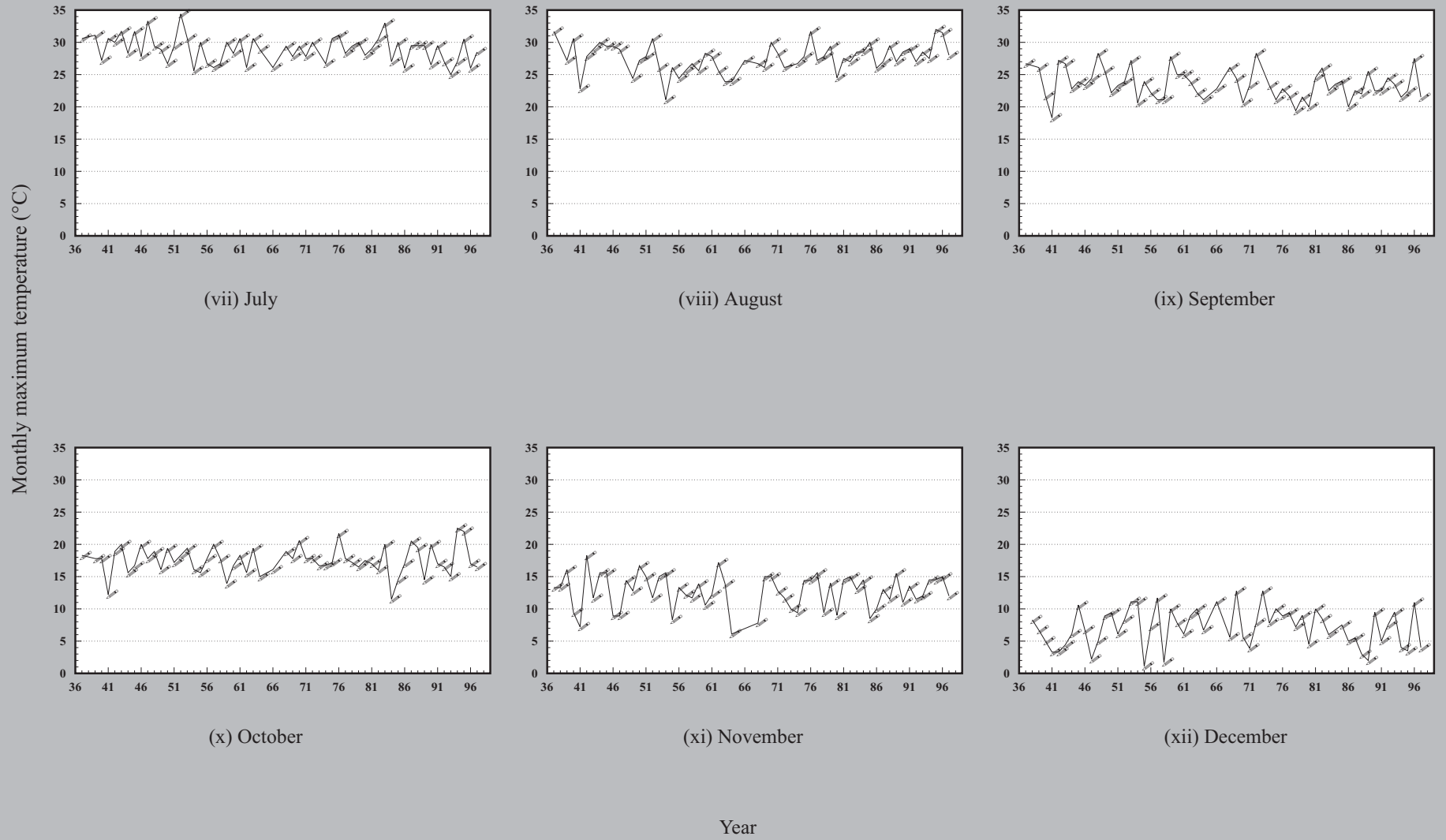


Fig. 2A-5a. Monthly maximum temperature (°C) for Buchans, 1937 - 1998. (missing data may not allow estimation for some years)

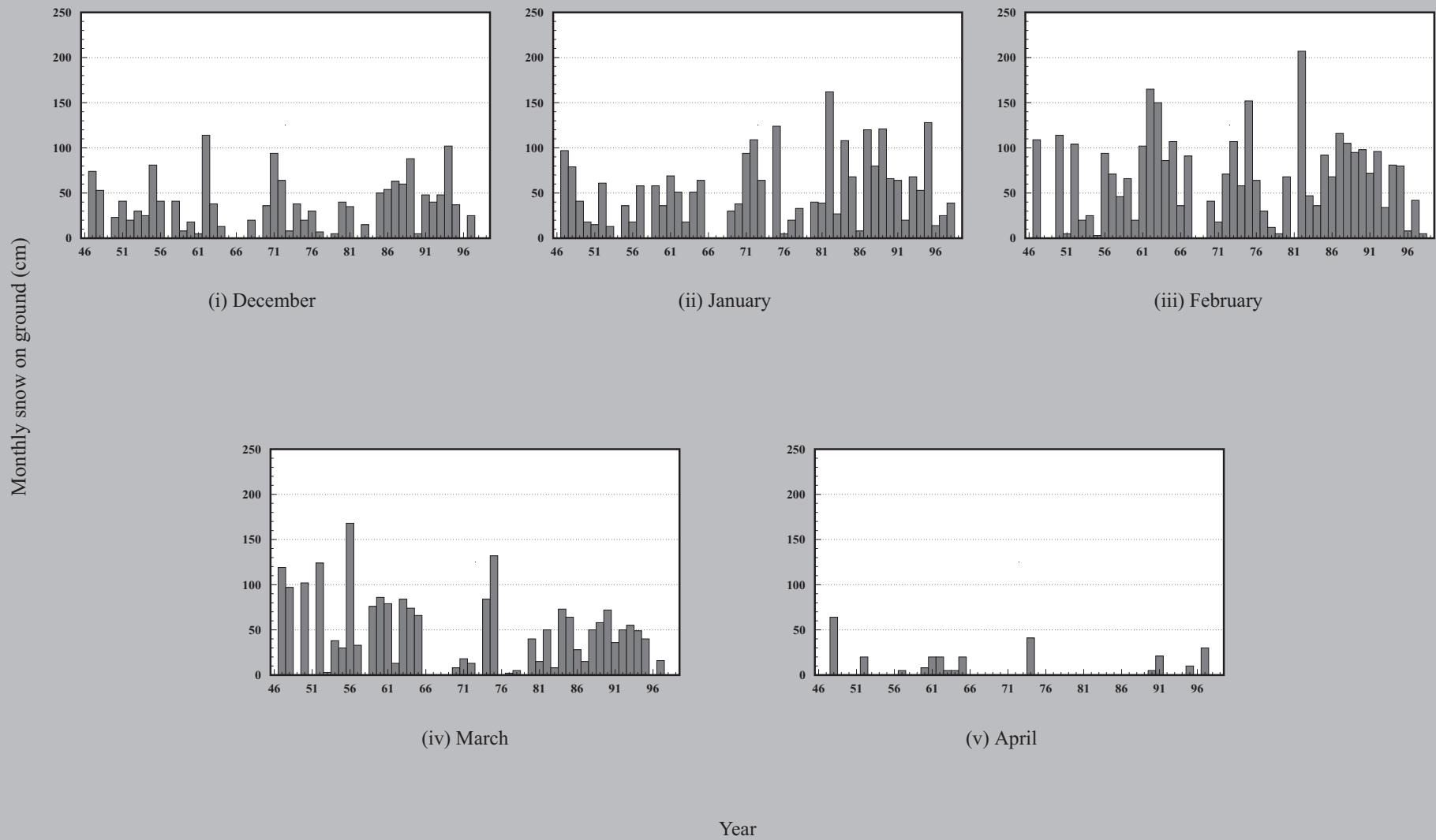
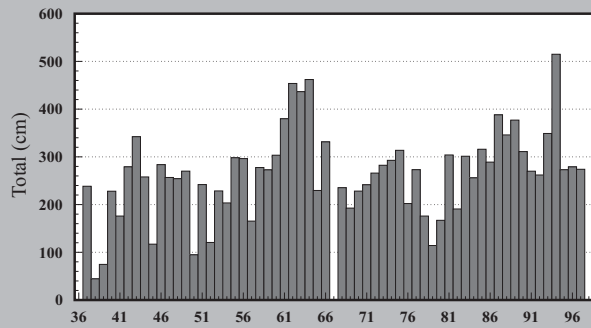
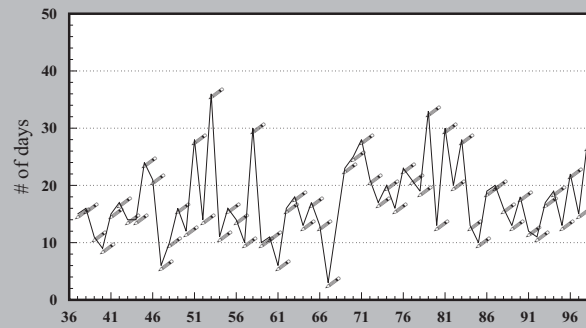


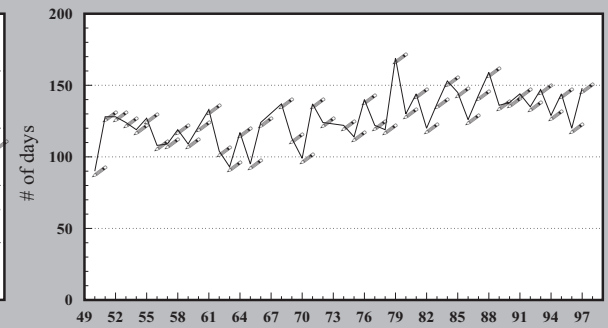
Fig. 2A-5b. Snow depth (cm) on ground on the last day of the month for Buchans, 1947-1998. (missing data may not allow estimation for some years)



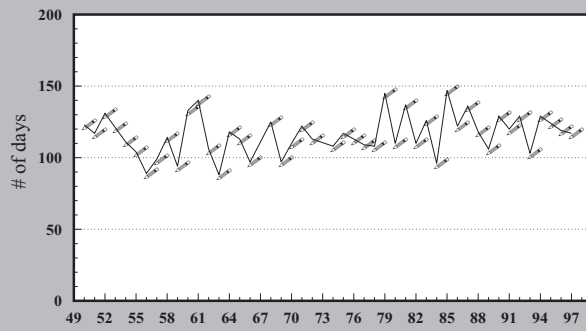
c. Snowfall



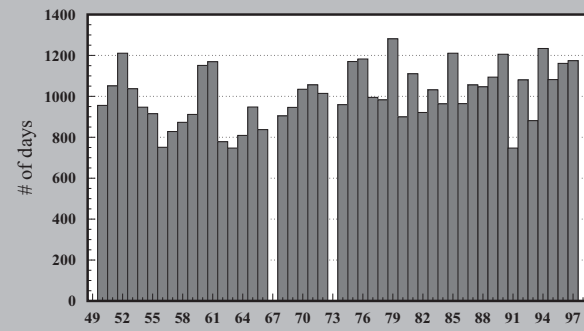
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-5c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Buchans, 1937 - 1998. (missing data may not allow estimation for some years)

Table 2A-5a. Monthly maximum temperature (°C) for Burgeo.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	7.2	3.3	3.9	11.1	26.1	17.2	22.8	21.7	18.9	15.6	12.8	9.4
1951	8.3	9.4	15.0	15.6	14.4	21.1	20.6	20.6	22.2	18.3	12.8	7.8
1952	6.1	5.6	6.1	8.9	17.8	20.6	22.8	23.3	21.1	15.6	11.1	8.9
1953	9.4	6.7	8.3	14.4	14.4	17.8	23.9	20.6	18.9	15.6	11.7	11.1
1954	6.7	9.4	11.7	10.0	16.1	19.4	21.1	21.1	17.8	15.0	15.0	8.9
1955	7.8	8.3	6.7	10.0	15.0	18.3	21.1	25.6	19.4	16.7	12.8	3.9
1956	9.4	4.4	3.9	9.4	13.9	18.3	22.2	21.7	19.4	16.7	11.1	8.3
1957	5.0	2.8	5.6	15.0	14.4	17.2	18.9	21.1	21.7	16.1	13.9	9.4
1958	9.4	5.0	11.7	12.2	15.6	18.3	24.4	21.1	18.9	13.9	10.0	5.6
1959	5.6	5.0	3.3	12.2	21.1	20.0	21.1	22.2	23.3	14.4	11.7	11.1
1960	6.1	7.8	3.9	12.2	17.2	18.3	18.9	21.7	20.0	17.2	9.4	7.2
1961	2.8	2.8	5.0	10.0	14.4	16.1	21.1	22.2	22.8	17.2	12.2	7.2
1962	5.6	6.1	10.6	6.7	16.7	16.7	20.0	20.6	17.8	15.0	14.4	10.0
1963	8.3	3.3	5.6	11.7	16.1	20.6	24.4	20.6	18.3	16.7	11.7	8.9
1964	6.1	6.1	5.6	10.0	15.0	20.0	19.4	20.0	18.9	14.4	10.0	6.1
1965	3.9	6.1	7.8	8.3	13.9	20.0	18.9	24.4	20.0	12.2	10.0	7.8
1966	5.0	3.9	11.1	11.1	15.6	17.2	22.2	20.6	17.8	13.9	15.0	8.3
1967	6.1	3.9	6.7	7.8	10.6	17.8	21.7	23.9	20.0	15.6	12.8	8.3
1968	5.6	7.2	7.2	10.6	17.2	16.1	22.2	20.0	21.7	16.7	10.0	7.8
1969	5.0	6.1	7.2	6.7	14.4	21.1	24.4	23.3	20.6	14.4	11.7	10.6
1970	2.8	6.7	7.8	10.6	17.2	16.1	21.7	26.7	16.7	17.2	12.8	9.4
1971	4.4	6.1	6.1	12.2	15.0	21.1	21.1	24.4	20.0	16.1	11.7	6.1
1972	6.1	3.9	6.7	7.2	18.3	19.4	24.4	21.1	21.7	15.6	10.6	8.3
1973	6.1	5.6	8.3	11.1	12.8	20.0	21.1	23.3	22.2	13.3	10.6	8.3
1974	4.4	4.4	2.8	11.1	12.2	22.8	20.6	23.3	20.0	14.4	9.4	7.8
1975	3.3	2.2	5.6	8.9	21.7	24.4	20.6	22.8	18.9	17.2	10.0	8.3
1976	8.3	8.9	7.8	9.4	13.9	23.3	19.4	21.7	18.9	15.6	10.6	8.9
1977	5.8	5.4	6.7	12.6	16.0	20.4	25.9	25.4	23.1	14.2	12.7	8.5
1978	6.5	6.0	4.5	8.9	15.7	15.4	24.0	22.8	19.5	13.7	10.7	6.6

Table 2A-5a (con'd). Monthly maximum temperature (°C) for Burgeo.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1979	8.7	7.9	9.2	11.5	15.3	22.9	22.0	22.0	19.8	16.0	12.5	8.6
1980	5.0	2.9	6.5	14.8	13.6	17.6	24.6	22.0	19.0	14.2	10.5	7.3
1981	5.9	7.0	8.6	8.3	15.2	19.5	20.6	22.4	22.4	15.9	12.8	11.5
1982	4.1	4.4	5.0	5.3	16.5	18.1	20.8	19.6	18.3	15.8	12.4	7.5
1983	8.0	6.0	9.2	11.4	15.0	18.8	21.7	20.3	19.0	15.9	12.0	7.0
1984	6.0	7.5	5.8	13.8	17.3	20.9	23.0	22.1	19.0	15.1	11.3	10.6
1985	3.2	4.1	6.9	8.3	17.1	18.6	24.0	22.0	20.0	17.3	11.8	8.2
1986	6.6	6.0	4.0	12.2	15.1	15.8	24.5	21.7	20.8	14.5	9.7	6.3
1987	3.3	4.4	8.4	13.4	14.6	19.0	23.8	24.5	19.8	17.6	10.4	6.4
1988	6.4	4.0	6.9	10.3	19.7	15.6	21.0	23.8	19.8	15.2	10.3	6.0
1989	4.6	4.5	4.4	10.2	13.5	21.1	22.8	25.2	18.5	13.1	12.0	7.5
1990	6.7	3.6	4.0	12.1	16.3	19.3	25.9	24.7	20.6	18.6	11.7	9.2
1991	2.9	6.6	9.3	11.9	15.0	18.2	24.0	22.0	21.6	20.6	12.4	8.1
1992	6.1	2.0	5.0	9.0	20.2	21.0	21.5	24.3	20.2	14.0	12.0	8.3
1993	6.0	5.0	6.3	9.5	14.3	18.0	22.7	23.4	22.2	15.5	11.3	10.9
1994	6.1	3.0	5.3	11.3	15.2	19.6	22.2	21.3	21.9	16.3	12.6	5.3
1995	7.1	5.0	6.0	10.8	17.8	18.4	24.7	-	-	-	-	-
Normal	-1.4	-2.0	0.5	4.5	8.8	12.6	16.5	18.1	15.2	10.3	5.8	1.3

Table 2A-5b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Burgeo.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	19	-	-	-	-	-	-
1951	45	85.1	-	-	-	-	-
1952	35	194.3	-	-	-	-	-
1953	37	82.6	-	-	-	-	-
1954	32	161.4	13	10	-	23	-
1955	24	151.2	81	20	8	3	0
1956	35	285.7	0	41	86	81	0
1957	20	292.0	0	76	76	0	0
1958	32	61.0	8	0	15	0	0
1959	25	251.6	0	25	51	25	-
1960	19	111.7	-	3	-	-	-
1961	15	250.2	3	-	56	-	0
1962	29	148.7	-	0	-	-	0
1963	17	208.3	-	-	-	-	-
1964	22	192.4	3	-	-	-	0
1965	26	206.9	5	-	-	0	0
1966	18	141.0	3	10	-	0	-
1967	18	247.8	0	8	61	46	0
1968	34	148.6	3	3	-	10	0
1969	39	188.0	0	3	0	0	0
1970	30	267.5	8	30	23	8	0
1971	36	281.6	28	10	0	3	0
1972	29	397.6	46	0	36	0	0
1973	24	315.2	0	5	41	5	0
1974	32	282.4	3	30	20	18	0
1975	29	224.1	0	36	46	10	0
1976	39	245.4	8	0	10	0	0
1977	22	225.7	2	1	2	0	0
1978	21	399.9	4	13	24	10	0
1979	37	201.1	1	0	10	2	0
1980	26	226.7	0	30	53	3	0
1981	36	193.9	3	10	0	0	0
1982	30	331.9	0	59	73	42	0
1983	51	147.2	13	9	24	2	0
1984	40	216.8	3	13	0	0	0
1985	21	237.0	27	36	25	19	0
1986	40	228.3	0	1	26	30	0
1987	32	215.6	21	47	69	0	0

Table 2A-5b (con'd). Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Burgeo.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1988	34	200.3	10	12	8	4	0
1989	23	265.9	14	25	48	48	0
1990	33	244.0	0	25	51	28	0
1991	26	220.1	16	73	31	0	0
1992	28	246.7	10	5	49	22	5
1993	33	181.4	23	17	27	14	0
1994	33	268.9	13	8	64	17	0
1995	28	275.0		29	49	9	0
Normal	32	265.9	8	17	29	13	0

Table 2A-5c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Burgeo.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	156	923.1	141
1951	156	1045.3	139
1952	171	1198.1	157
1953	161	949.4	143
1954	146	943.7	128
1955	153	874.8	128
1956	134	870.8	123
1957	139	902.1	139
1958	163	929.9	142
1959	160	920.6	126
1960	168	924.1	141
1961	166	1001.4	145
1962	159	824.9	138
1963	155	854.1	140
1964	158	838.4	142
1965	144	834.7	125
1966	159	858.2	139
1967	133	977.9	127
1968	184	984.0	145
1969	172	953.4	144
1970	162	1055.2	139
1971	142	991.2	141
1972	143	932.4	139
1973	173	901.1	146

Table 2A-5c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for Burgeo.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1974	163	883.0	136
1975	144	1004.1	119
1976	170	1001.0	144
1977	174	955.4	149
1978	160	930.8	136
1979	168	939.9	149
1980	167	785.9	120
1981	145	1130.1	161
1982	150	863.4	130
1983	163	1032.1	138
1984	161	1024.5	137
1985	150	936.7	144
1986	152	844.8	132
1987	140	1063.0	140
1988	149	916.0	145
1989	161	970.3	136
1990	171	1043.3	144
1991	150	916.5	145
1992	145	949.5	155
1993	150	977.8	144
1994	148	1000.0	129
1995	-	-	-
1996	-	-	-
1997	169	-	-
Normal	-	1033.0	-

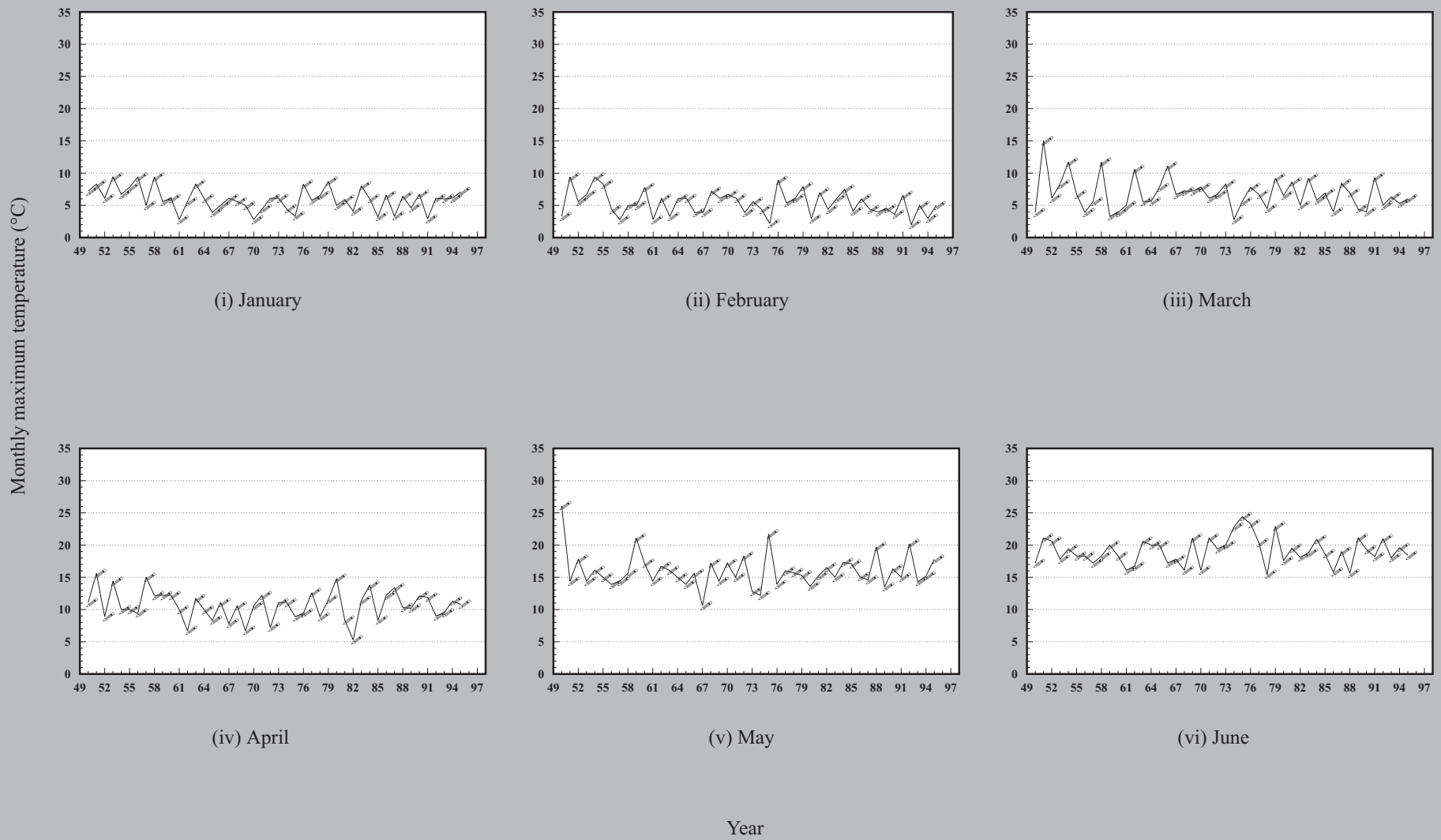


Fig. 2A-6a. Monthly maximum temperature (°C) for Burgeo, 1950 - 1997. (missing data may not allow estimation for some years)

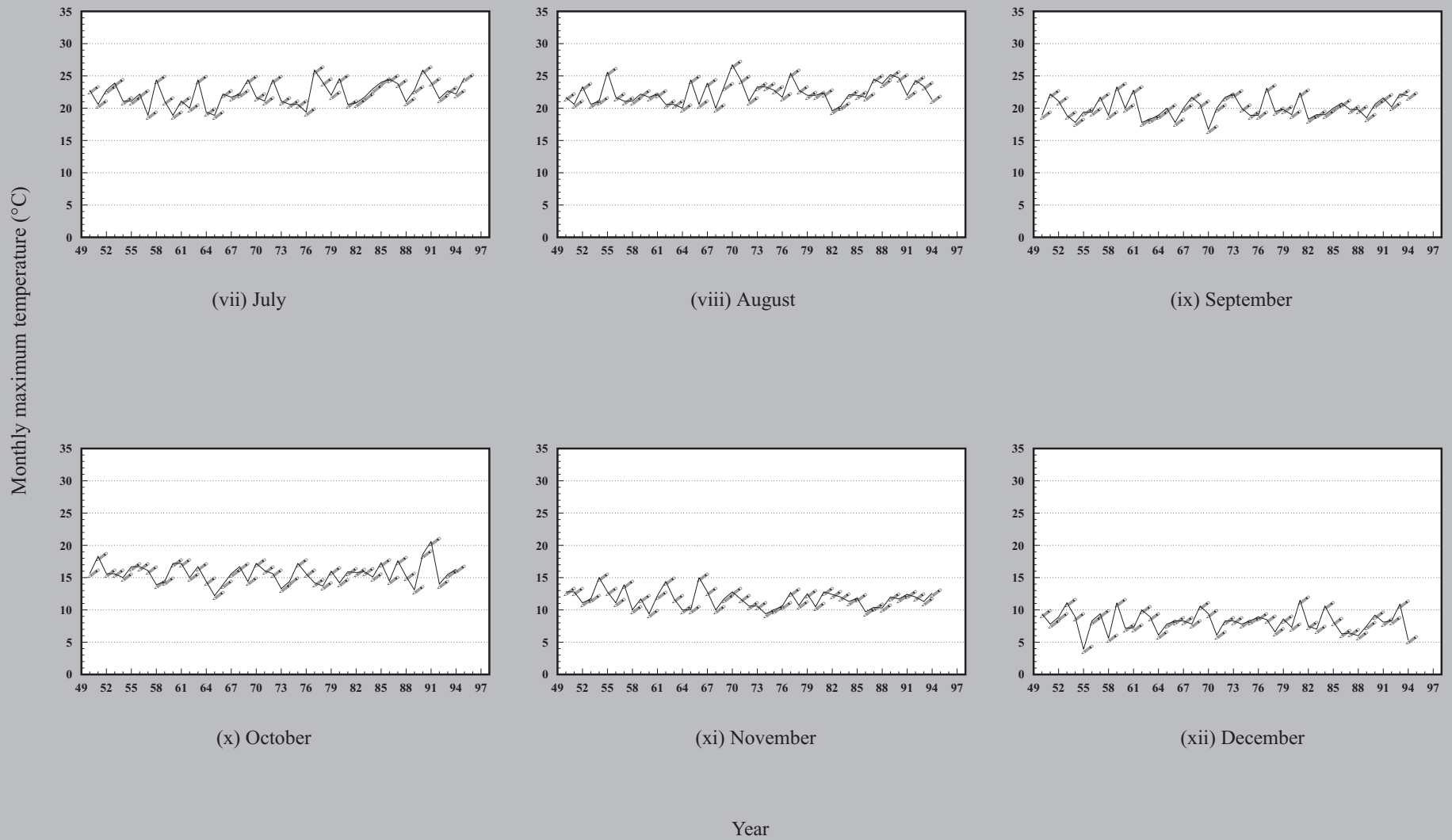


Fig. 2A-6a (con'd). Monthly maximum temperature (°C) for Burgeo, 1950 - 1997. (missing data may not allow estimation for some years)

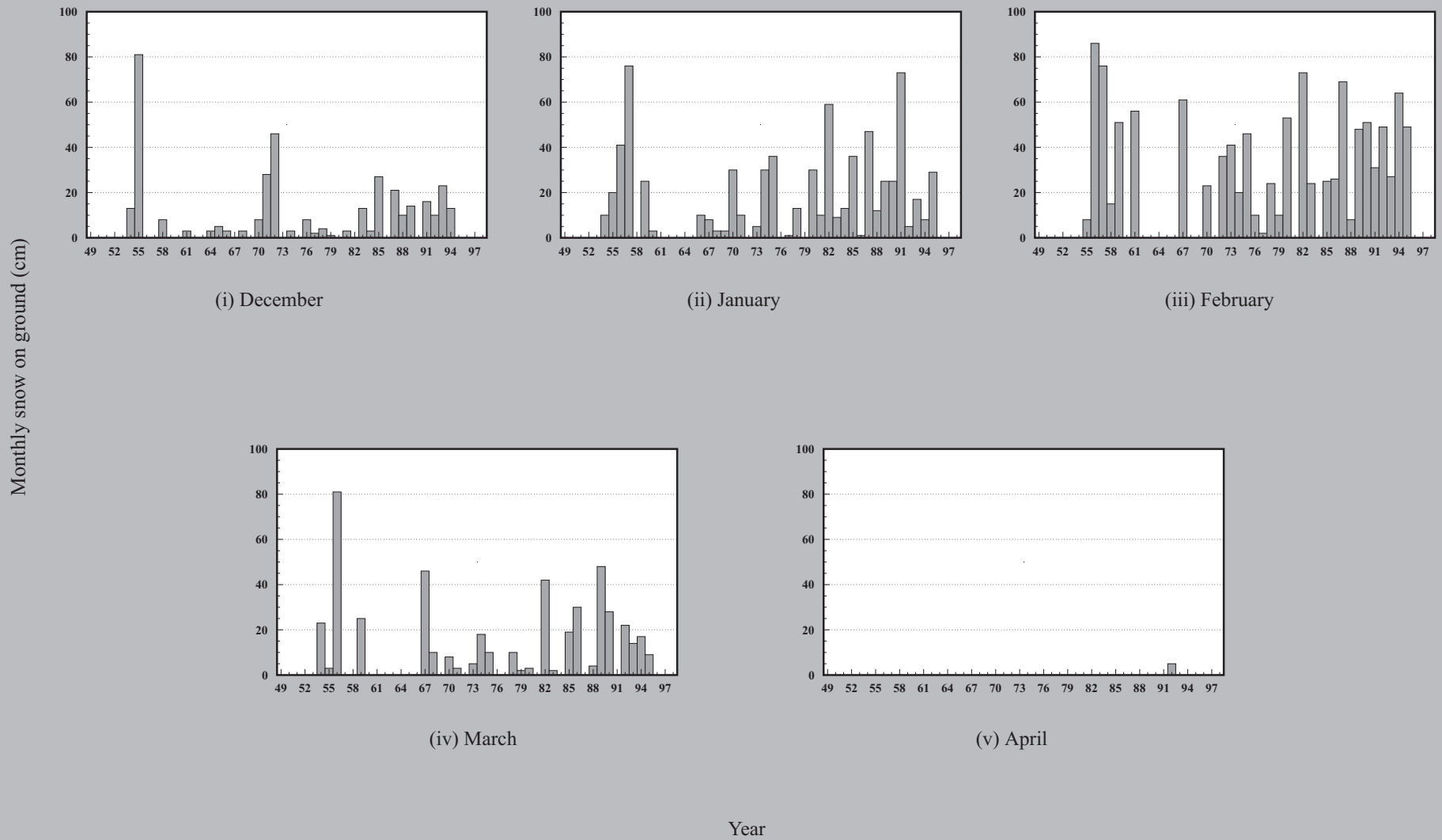
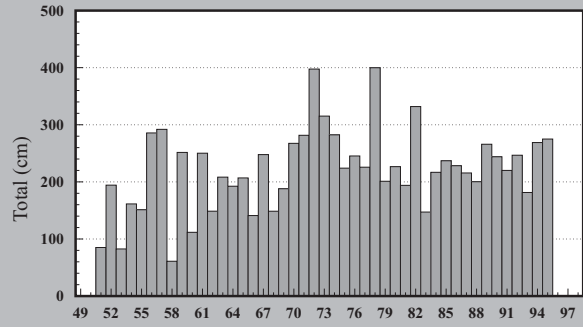
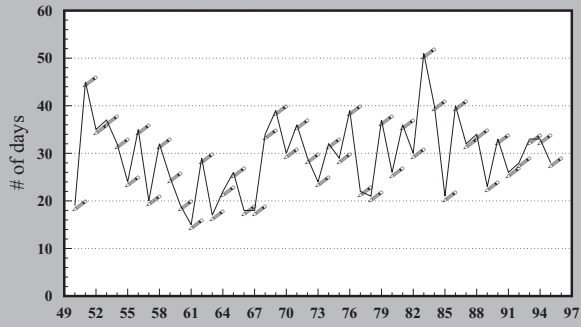


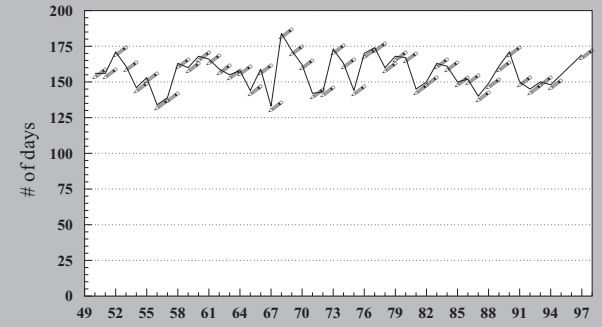
Fig. 2A-6b. Snow depth (cm) on ground on the last day of the month for Burgeo, 1950 - 1997. (missing data may not allow estimation for some years)



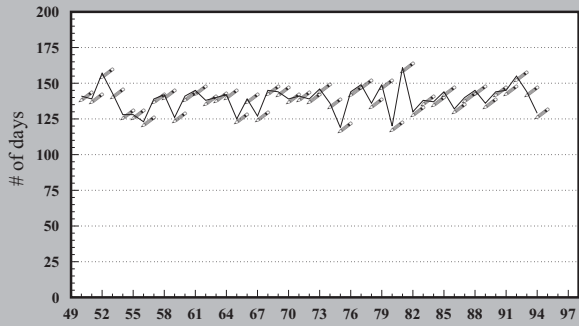
c. Snowfall



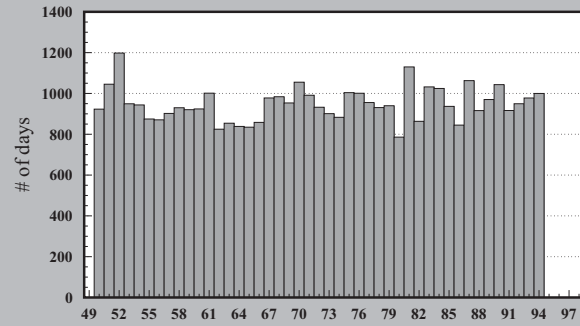
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-6c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Burgeo, 1950 - 1997. (missing data may not allow estimation for some years)

Table 2A-6a. Monthly maximum temperature (°C) for Burnt Pond.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1972	-	-	-	-	-	-	27.8	26.7	28.3	19.4	11.1	8.3
1973	4.4	5.0	8.9	11.7	17.8	27.2	26.7	25.0	22.8	18.3	10.0	11.1
1974	3.3	5.0	3.3	8.3	13.9	28.3	23.9	27.8	20.0	16.7	9.4	8.3
1975	1.7	1.1	8.3	7.2	18.3	26.7	29.4	26.1	25.0	16.7	13.9	7.2
1976	7.8	9.4	7.8	10.6	21.7	28.9	26.1	28.9	21.7	20.6	13.3	10.0
1977	6.7	7.2	9.4	12.8	22.2	26.7	27.8	27.8	21.7	17.2	15.6	11.7
1978	7.2	4.4	4.4	7.2	19.4	25.6	26.1	28.9	20.6	17.8	11.7	6.7
1979	7.2	5.0	11.7	19.4	23.3	25.0	29.0	27.0	23.0	15.0	13.5	9.5
1980	4.0	3.5	3.5	12.5	18.5	26.5	26.5	25.0	21.5	17.5	12.0	5.0
1981	4.5	7.5	5.0	11.0	20.5	24.5	28.5	27.5	26.5	17.0	14.0	10.0
1982	2.0	5.0	5.0	12.5	19.0	22.5	30.0	25.0	26.5	15.0	16.0	9.0
1983	10.0	5.0	9.0	18.0	21.0	26.0	28.0	25.5	26.0	18.0	13.5	6.0
1984	4.0	6.5	7.0	14.0	21.0	23.0	27.0	25.5	24.0	12.5	14.0	9.0
1985	1.0	3.0	4.0	10.0	21.5	25.0	27.5	28.5	25.0	18.0	8.0	6.0
1986	10.0	2.0	8.0	19.5	22.0	22.0	26.0	25.5	18.5	15.0	9.0	5.0
1987	1.5	2.0	7.0	14.5	20.0	23.0	29.0	25.0	21.0	21.0	13.5	6.0
1988	4.0	5.0	6.5	9.5	24.0	28.0	29.0	27.0	22.0	16.0	12.0	3.5
1989	3.0	4.0	7.0	10.0	21.0	26.0	28.0	27.0	24.5	14.0	15.0	2.0
1990	4.0	3.5	5.5	8.5	18.0	26.0	28.5	28.0	20.5	18.0	13.0	9.0
1991	1.0	5.0	5.0	13.0	19.5	24.5	30.0	29.5	20.0	16.5	14.0	3.0
1992	4.5	2.5	7.0	7.5	23.0	22.0	25.5	24.5	24.0	16.0	9.0	5.5
1993	4.0	6.0	9.5	7.5	21.5	25.0	25.0	25.5	25.0	14.0	10.5	11.5
1994	4.5	1.0	6.0	11.0	18.0	27.5	27.5	25.5	21.0	23.0	12.0	3.0
1995	6.0	3.0	6.0	8.0	15.5	29.5	27.5	28.0	22.5	21.5	11.0	5.0
1996	7.5	10.0	9.0	15.0	16.5	23.0	24.0	31.0	-	15.0	14.0	12.0
1997	7.0	3.0	3.0	6.5	16.0	-	-	-	-	-	-	-

Table 2A-6b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Burnt Pond.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1972	-	-	46	-	-	-	-
1973	18	397.2	3	46	142	-	15
1974	27	258.3	-	36	33	58	10
1975	20	329.9	13	97	114	69	23
1976	30	385.1	20	0	30	20	0
1977	22	329.1	12	15	33	17	0
1978	17	495.3	27	50	81	40	22
1979	30	235.4	0	0	0	0	0
1980	17	318.2	0	0	0	0	0
1981	40	258.5	25	36	5	3	0
1982	24	415.1	3	101	172	120	52
1983	41	244.6	27	29	72	-	0
1984	32	403.5	-	48	15	65	17
1985	17	334.9	33	80	95	67	2
1986	32	292.6	60	0	62	74	0
1987	25	301.4	52	148	140	78	0
1988	22	411.6	32	59	95	110	-
1989	15	302.3	-	98	85	100	16
1990	20	346.9	-	104	148	-	-
1991	16	288.5	-	86	129	60	-
1992	18	424.7	14	33	89	-	60
1993	25	281.8	62	-	-	-	-
1994	27	393.0	-	45	92	67	-
1995	19	383.7	-	-	-	-	-
1996	32	192.7	-	-	-	-	0
1997	18	444.9	-	-	-	140	-

Table 2A-6c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Burnt Pond.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1972	-	936.1	-
1973	97	872.3	95
1974	101	874.2	111
1975	113	1070.9	117
1976	116	982.0	109
1977	81	874.6	108
1978	108	852.6	109
1979	139	1043.1	128
1980	90	859.7	113
1981	106	1029.9	140
1982	126	932.0	122
1983	133	1088.8	139
1984	83	955.4	114
1985	91	893.2	111
1986	97	778.6	106
1987	117	911.5	117
1988	109	903.0	118
1989	100	1097.1	136
1990	94	926.0	118
1991	75	569.3	76
1992	84	833.1	117
1993	80	793.4	115
1994	89	924.9	129
1995	90	941.7	131
1996	-	-	122

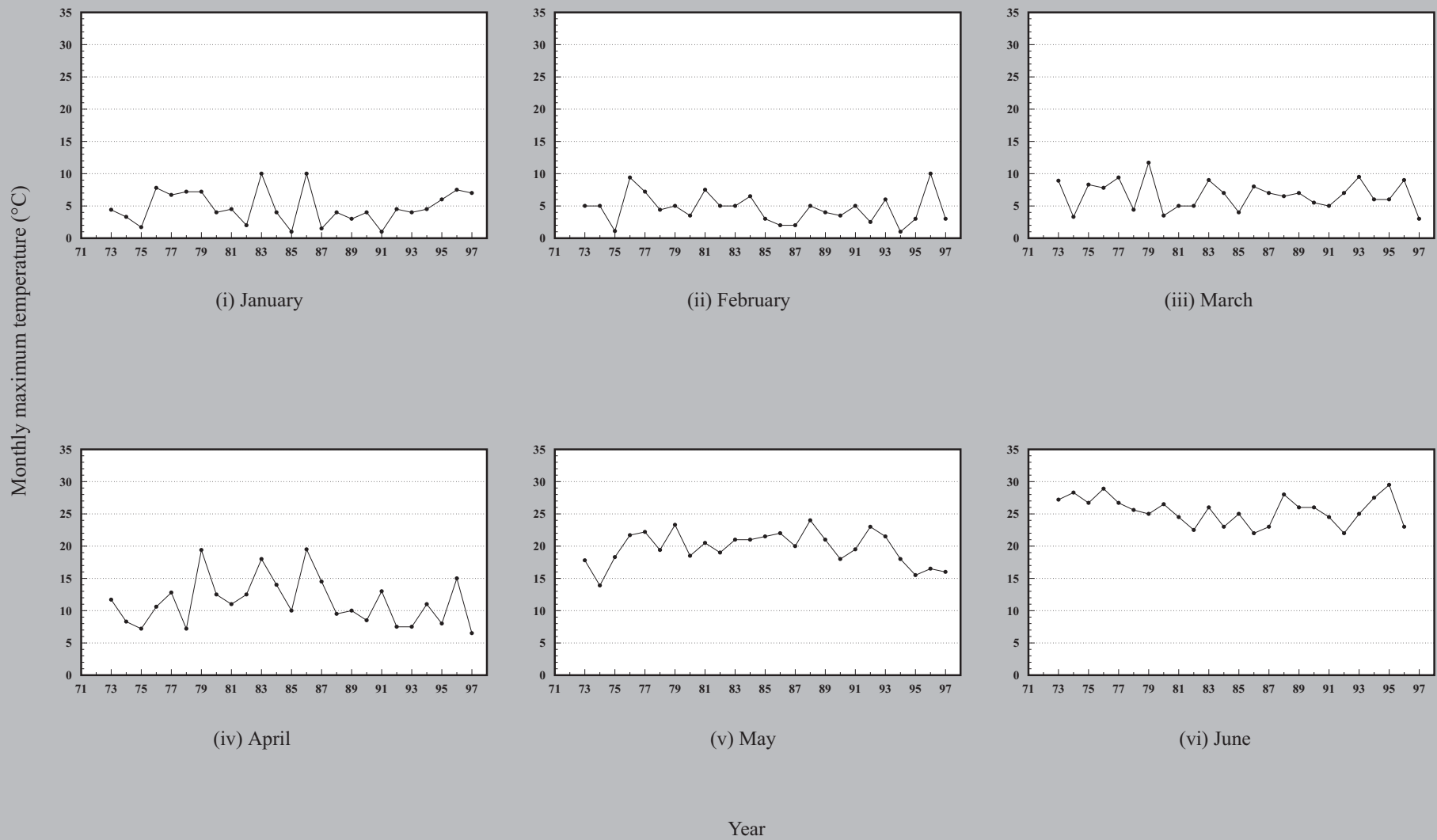


Fig. 2A-7a. Monthly maximum temperature (°C) for Burnt Pond, 1972 - 1997. (missing data may not allow estimation for some years)

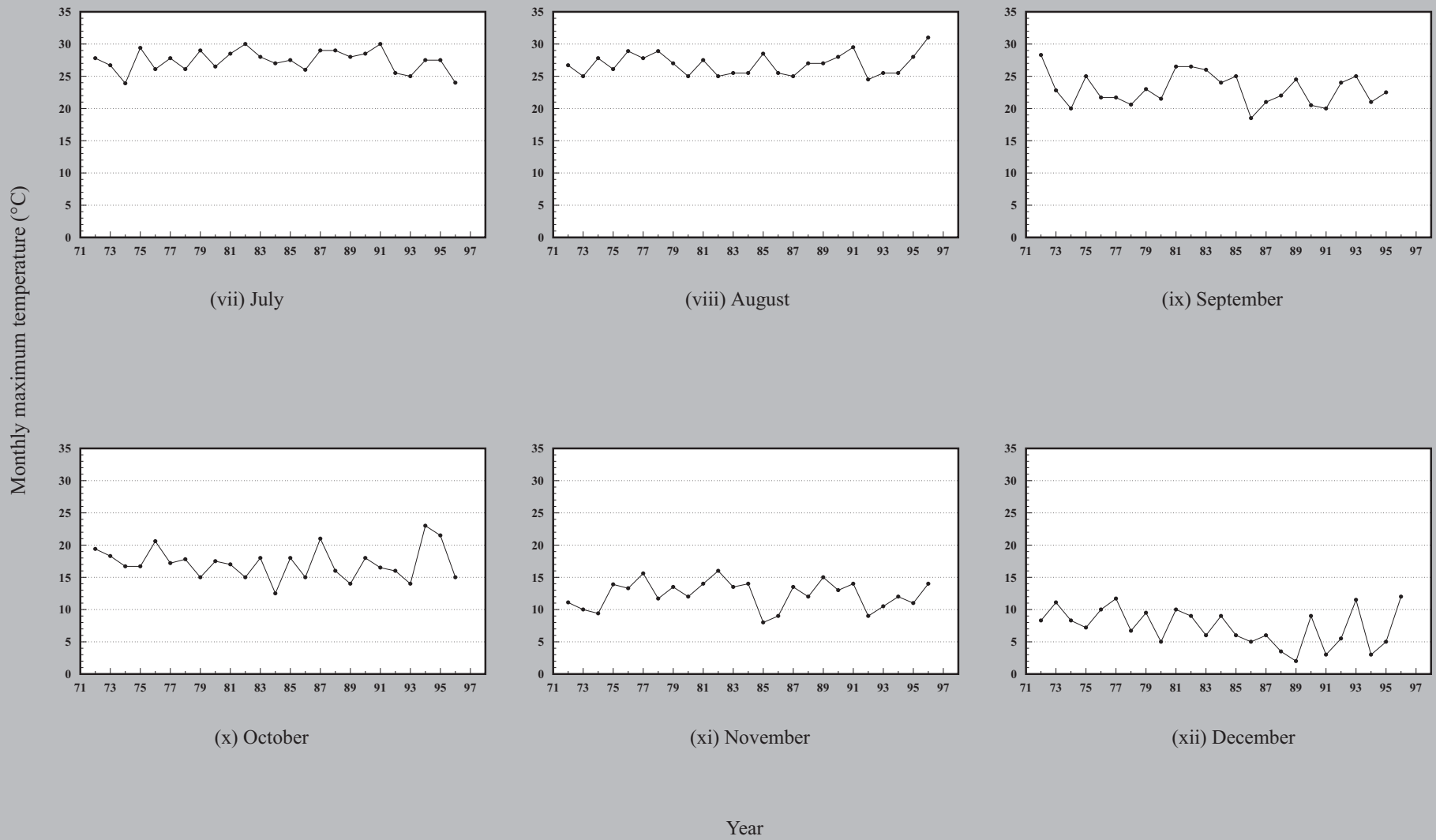


Fig. 2A-7a (con'd). Monthly maximum temperature (° C) for Burnt Pond, 1972 - 1997. (missing data may not allow estimation for some years)

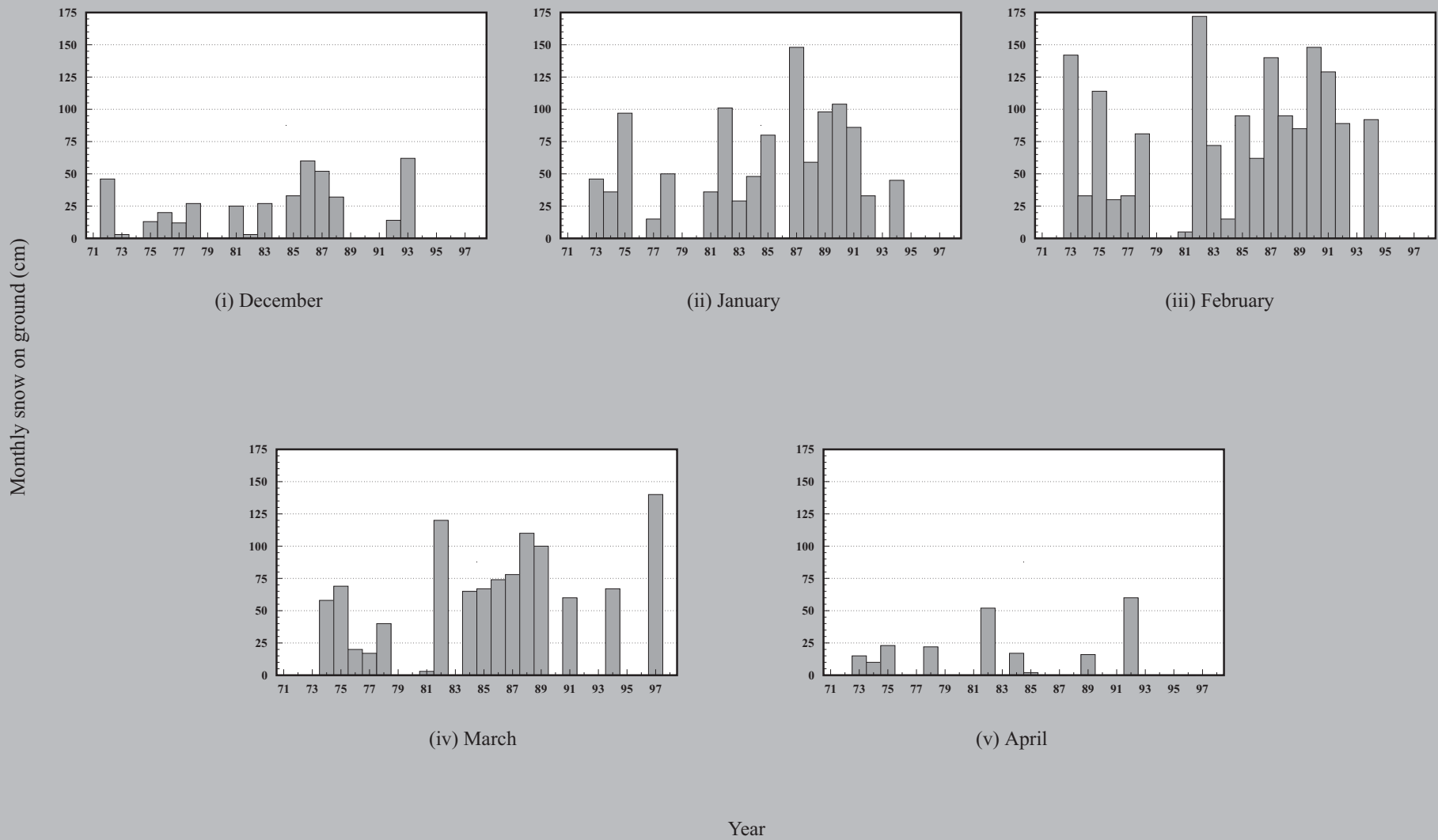
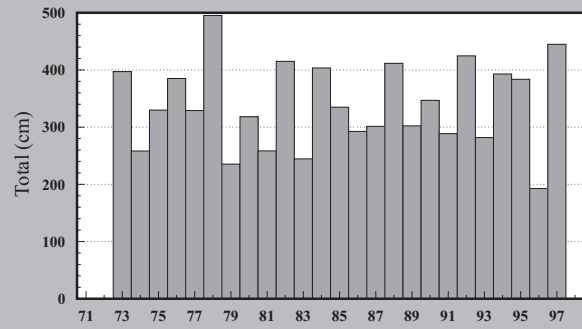
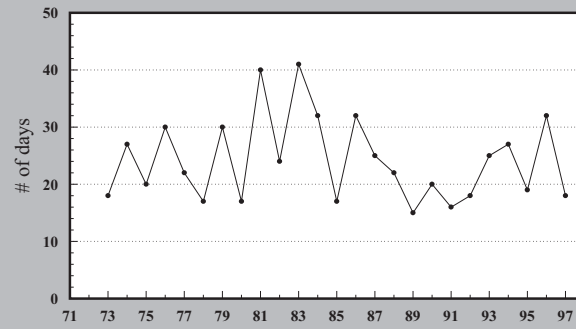


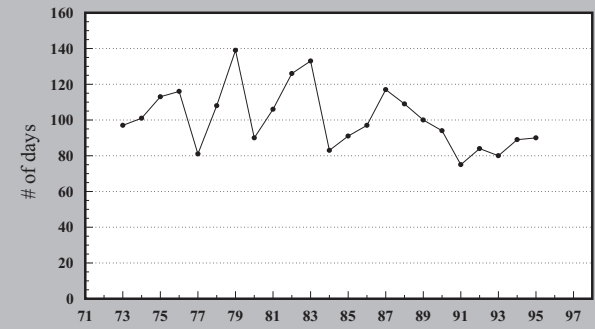
Fig. 2A-7b. Snow depth (cm) on ground on the last day of the month for Burnt Pond 1972-1997. (missing data may not allow estimation for some years)



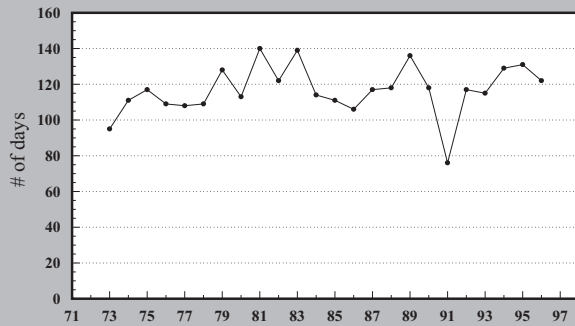
c. Snowfall



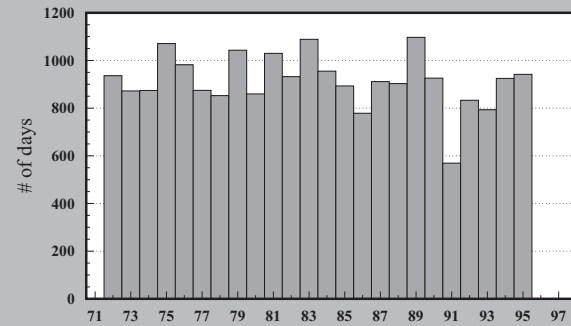
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-7c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Burnt Pond, 1972 - 1997. (missing data may not allow estimation for some years)

Table 2A-7a. Monthly maximum temperature (°C) for Cape Race.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	5.6	7.2	5.0	14.4	16.7	21.7	23.3	23.9	21.1	16.7	11.7	10.6
1951	8.9	7.8	7.8	10.6	18.3	17.8	22.2	21.1	19.4	16.1	15.0	11.1
1952	8.9	6.1	5.0	13.3	13.9	21.1	21.1	-	19.4	17.8	12.2	9.4
1953	8.3	6.7	7.2	10.6	13.9	17.2	26.7	21.7	22.8	15.6	12.2	10.6
1954	6.7	5.6	8.3	8.3	14.4	17.8	20.6	21.7	21.7	15.6	12.2	10.0
1955	10.6	9.4	5.6	7.2	13.3	23.9	22.2	22.8	20.6	13.9	10.0	5.6
1956	5.6	5.6	5.6	11.1	12.2	20.0	21.7	19.4	16.7	15.6	11.7	8.9
1957	6.7	1.7	3.9	6.1	16.7	21.1	24.4	21.1	18.3	14.4	11.7	9.4
1958	6.7	8.9	8.3	9.4	15.6	16.7	23.3	23.3	18.9	13.9	10.0	7.2
1959	4.4	5.6	3.9	10.0	15.6	19.4	23.3	21.1	24.4	18.3	12.8	9.4
1960	6.7	3.3	3.9	13.3	20.0	17.8	21.7	23.9	20.0	15.0	15.0	10.6
1961	5.0	5.6	3.9	7.8	13.9	25.0	23.3	22.2	22.2	18.3	12.8	7.2
1962	7.2	7.8	8.9	8.9	11.1	17.8	18.9	23.3	19.4	18.9	13.9	8.9
1963	7.2	4.4	4.4	11.7	17.2	18.9	25.0	20.0	18.9	15.0	11.7	8.9
1964	4.4	5.0	4.4	10.0	13.9	16.1	21.1	20.0	17.2	14.4	7.8	7.2
1965	6.1	5.0	6.1	12.8	12.8	19.4	23.3	21.1	15.6	16.7	10.6	8.3
1966	3.3	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	3.9	7.2	-	11.7	17.2	22.2	-	-	-	-	-

Table 2A-7b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Cape Race.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	40	-	-	-	-	-	-
1951	66	80.1	-	-	3	-	-
1952	56	162.8	-	0	-	13	-
1953	50	94.6	-	-	-	0	-
1954	41	68.5	-	-	0	0	-
1955	30	94.2	3	-	0	8	0
1956	37	106.9	0	5	5	3	0
1957	20	96.0	0	8	8	0	0
1958	44	61.4	10	0	8	0	0
1959	28	136.4	10	8	10	10	0
1960	25	246.3	0	13	13	8	0
1961	29	226.1	0	13	13	0	0
1962	45	177.8	0	10	8	0	0
1963	45	213.9	20	0	8	3	0
1964	39	383.3	3	23	28	38	0
1965	45	276.4	5	43	20	18	0
1966	-	-	5	-	-	-	-
1967	-	-	-	-	-	-	-
1968	-	-	-	-	-	-	-
1969	-	-	-	-	0	-	-

Table 2A-7c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Cape Race.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	131	821.2	132
1951	141	901.2	129
1952	155	913.7	144
1953	131	815.7	114
1954	111	725.2	111
1955	131	661.8	105
1956	121	716.0	123
1957	134	692.6	115
1958	129	847.6	129
1959	105	748.4	108
1960	146	902.2	141
1961	143	860.6	114
1962	112	548.9	97
1963	119	580.0	85
1964	130	677.0	126
1965	113	623.9	95

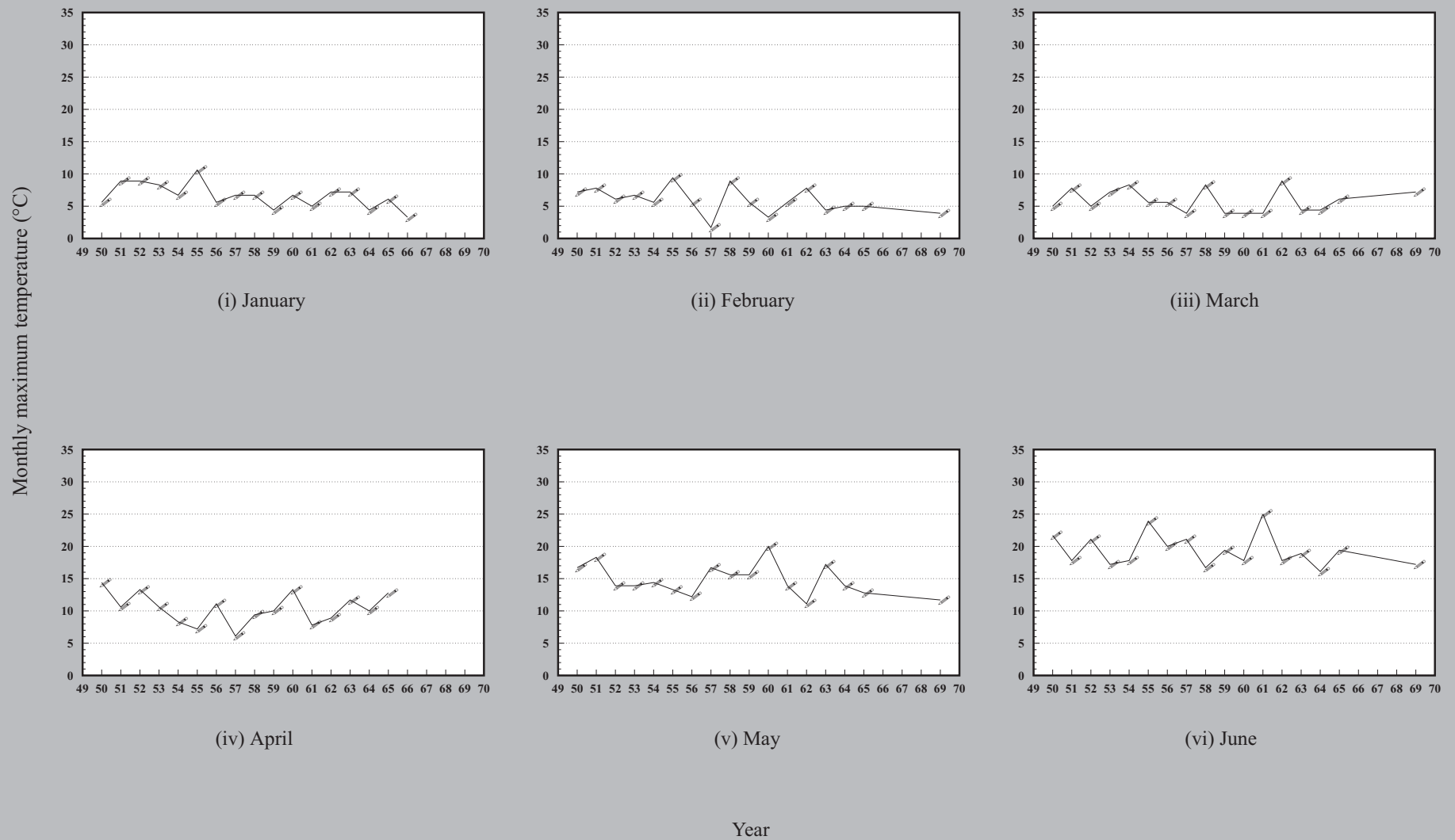


Fig. 2A-8a. Monthly maximum temperature (°C) for Cape Race, 1950 - 1969. (missing data may not allow estimation for some years)

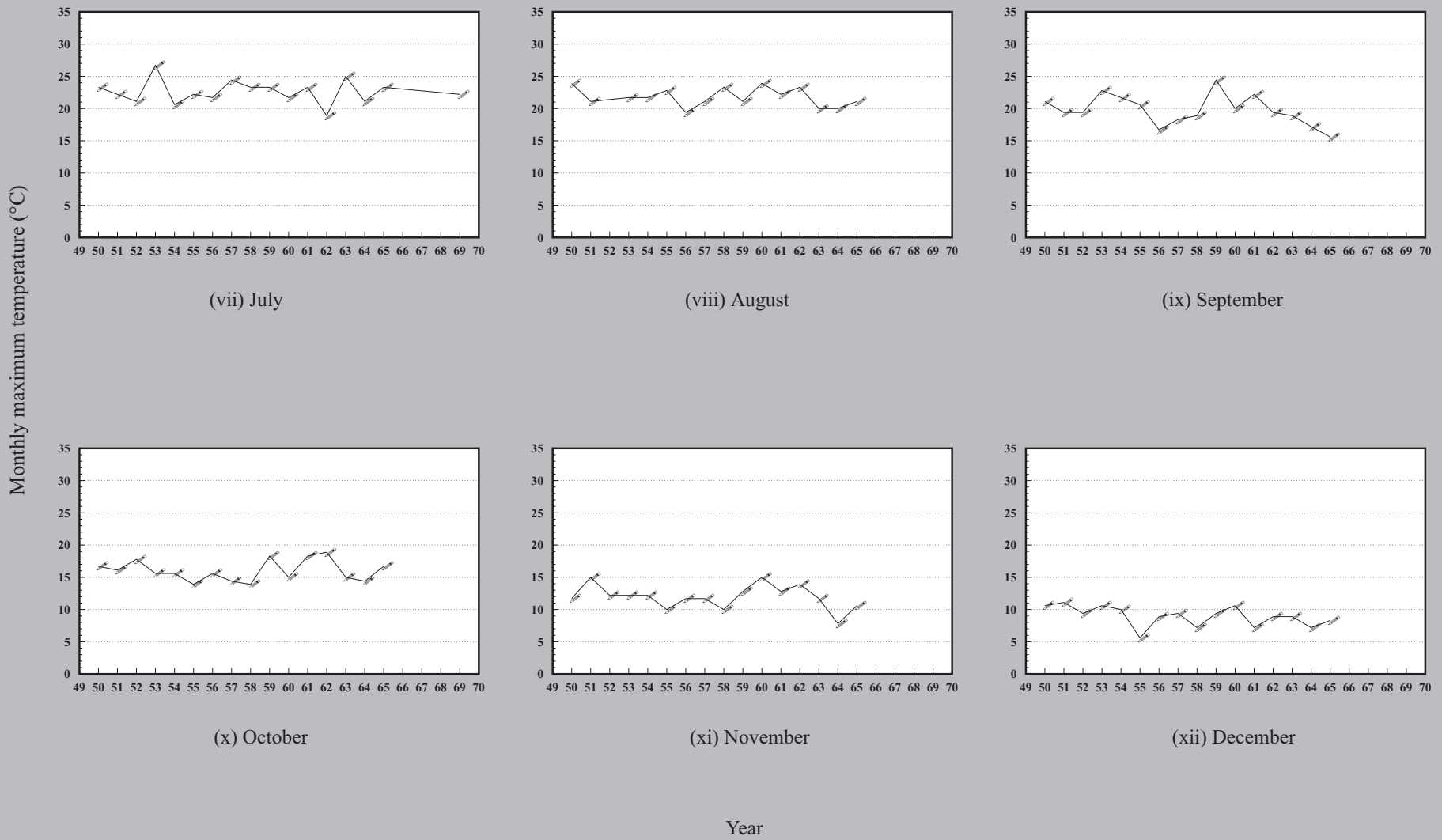


Fig. 2A-8a (con'd). Monthly maximum temperature (°C) for Cape Race, 1950 - 1969. (missing data may not allow estimation for some years)

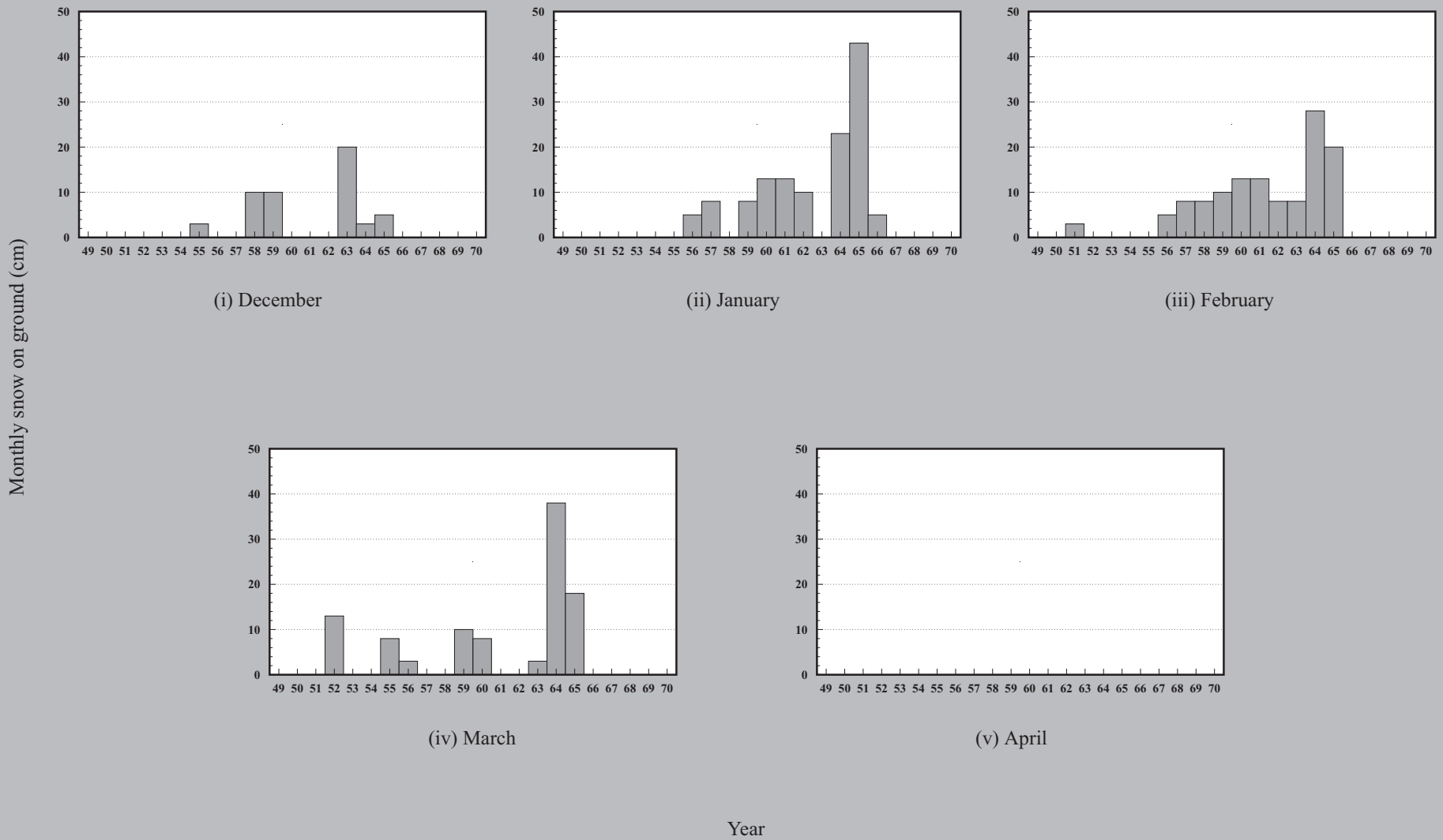
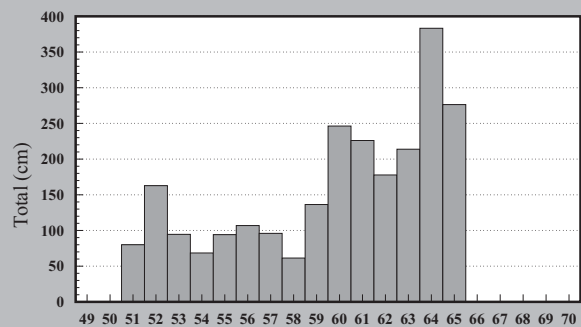
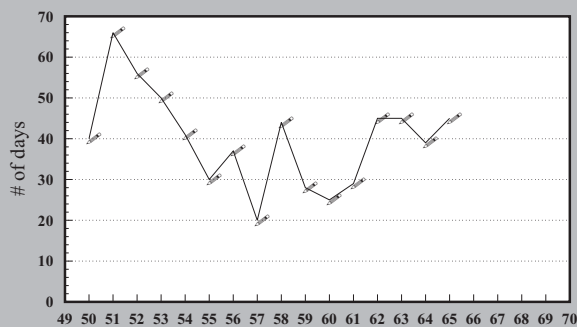


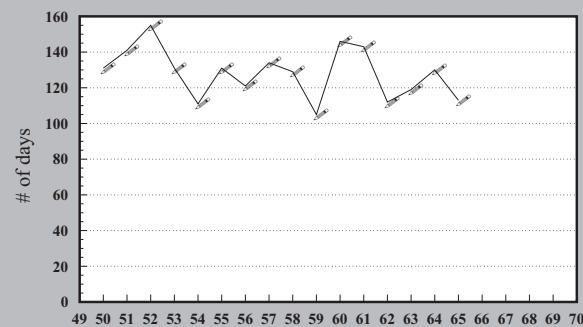
Fig. 2A-8b. Snow depth (cm) on ground on the last day of the month for Cape Race, 1950 - 1969. (missing data may not allow estimation for some years)



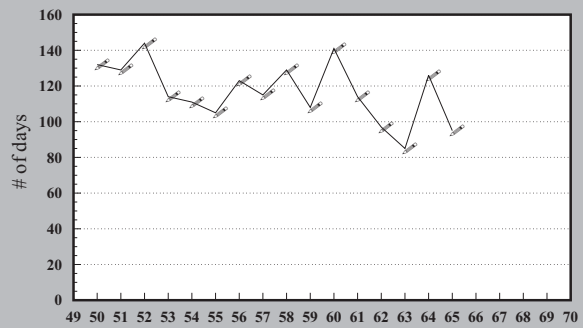
c. Snowfall



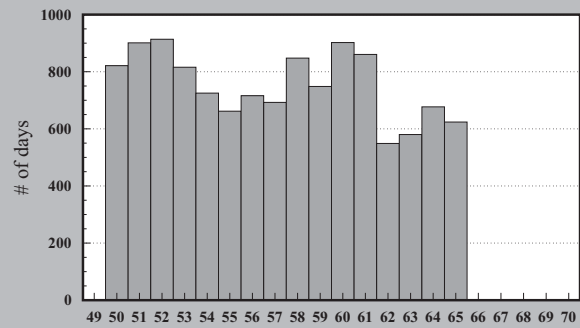
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-8c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Cape Race, 1950 - 1969. (missing data may not allow estimation for some years)

Table 2A-8a. Monthly maximum temperature (°C) for Clarenville.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1978	-	6.0	10.0	12.5	22.0	26.5	28.5	29.5	-	17.0	12.0	8.0
1979	13.0	7.0	14.0	17.0	24.0	26.0	30.0	30.0	-	19.0	16.0	13.0
1980	5.0	5.0	6.0	16.0	19.5	25.5	28.0	27.5	25.5	18.5	12.0	10.0
1981	10.0	10.0	6.0	12.0	25.0	23.0	33.0	28.5	24.0	18.0	16.0	13.0
1982	5.0	7.0	10.0	17.5	19.0	19.5	28.0	26.5	27.0	18.0	17.0	10.0
1983	11.0	-	-	-	-	-	-	-	-	-	-	10.0
1984	9.5	11.5	14.5	11.5	22.5	22.5	28.5	28.5	27.5	16.0	16.5	13.5
1985	4.5	7.5	7.0	10.5	18.5	25.5	29.0	29.0	24.0	18.0	12.0	10.0
1986	12.0	8.0	9.5	21.5	30.0	24.5	28.5	27.5	20.5	17.0	11.0	6.0
1987	7.5	4.0	8.0	17.0	21.0	23.0	29.5	29.0	22.5	20.5	16.0	12.0
1988	8.5	7.5	11.5	13.5	28.5	26.5	27.5	29.5	25.5	21.5	15.5	7.5
1989	7.5	9.5	7.0	12.5	23.5	26.0	27.0	29.5	27.5	19.5	16.0	6.5
1990	12.0	9.0	9.0	16.0	21.0	28.0	30.0	28.5	23.0	22.0	12.0	12.5
1991	4.0	9.5	11.0	15.0	19.0	23.5	30.5	29.0	24.0	21.0	18.0	9.5
1992	8.5	5.5	11.0	14.5	21.5	22.0	26.0	28.0	26.5	20.0	14.0	6.5
1993	8.5	11.0	14.5	14.0	20.0	29.0	25.0	27.5	25.0	17.0	15.0	13.0
1994	8.0	3.5	10.5	14.0	17.5	26.0	28.5	28.5	23.5	23.5	16.5	5.0
1995	7.5	8.0	10.0	15.0	21.0	26.0	33.0	-	25.5	21.0	16.0	6.0
1996	12.0	13.5	14.0	-	18.5	27.0	28.0	33.0	25.0	-	-	12.0
1997	8.0	4.0	7.5	-	16.0	26.0	29.0	31.0	23.5	-	-	-

Table 2A-8b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Clarendville.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1978	12	-	0	-	0	11	0
1979	38	140.5	0	0	0	0	0
1980	22	170.5	0	19	67	0	0
1981	35	119.6	30	35	0	-	0
1982	22	298.5	-	65	69	28	0
1983	-	-	8	20	-	-	-
1984	34	174.4	2	6	0	29	0
1985	11	165.4	23	25	50	40	0
1986	16	188.0	14	-	28	20	0
1987	30	147.6	29	49	63	15	0
1988	17	216.3	34	35	18	15	0
1989	10	234.0	14	53	35	72	0
1990	19	177.0	0	12	24	-	0
1991	18	151.0	25	52	50	6	0
1992	23	201.0	26	7	43	0	0
1993	27	167.0	26	7	14	-	0
1994	22	207.6	42	8	58	35	0
1995	14	316.0	0	77	69	47	-
1996	12	147.9	-	-	-	-	0
1997	14	219.0	0	15	25	13	-

Table 2A-8c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Clarendville.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1978	-	-	99
1979	-	955.5	161
1980	118	1303.6	127
1981	143	1060.5	-
1982	122	-	140
1983	-	1266.0	147
1984	80	1242.8	138
1985	107	1060.2	141
1986	134	1206.3	134
1987	134	1221.7	142
1988	158	1402.6	154
1989	129	1382.2	142
1990	151	1073.1	133
1991	135	1151.4	110
1992	152	871.9	131
1993	127	1341.4	133
1994	140	1236.7	137
1995	119	1232.5	-

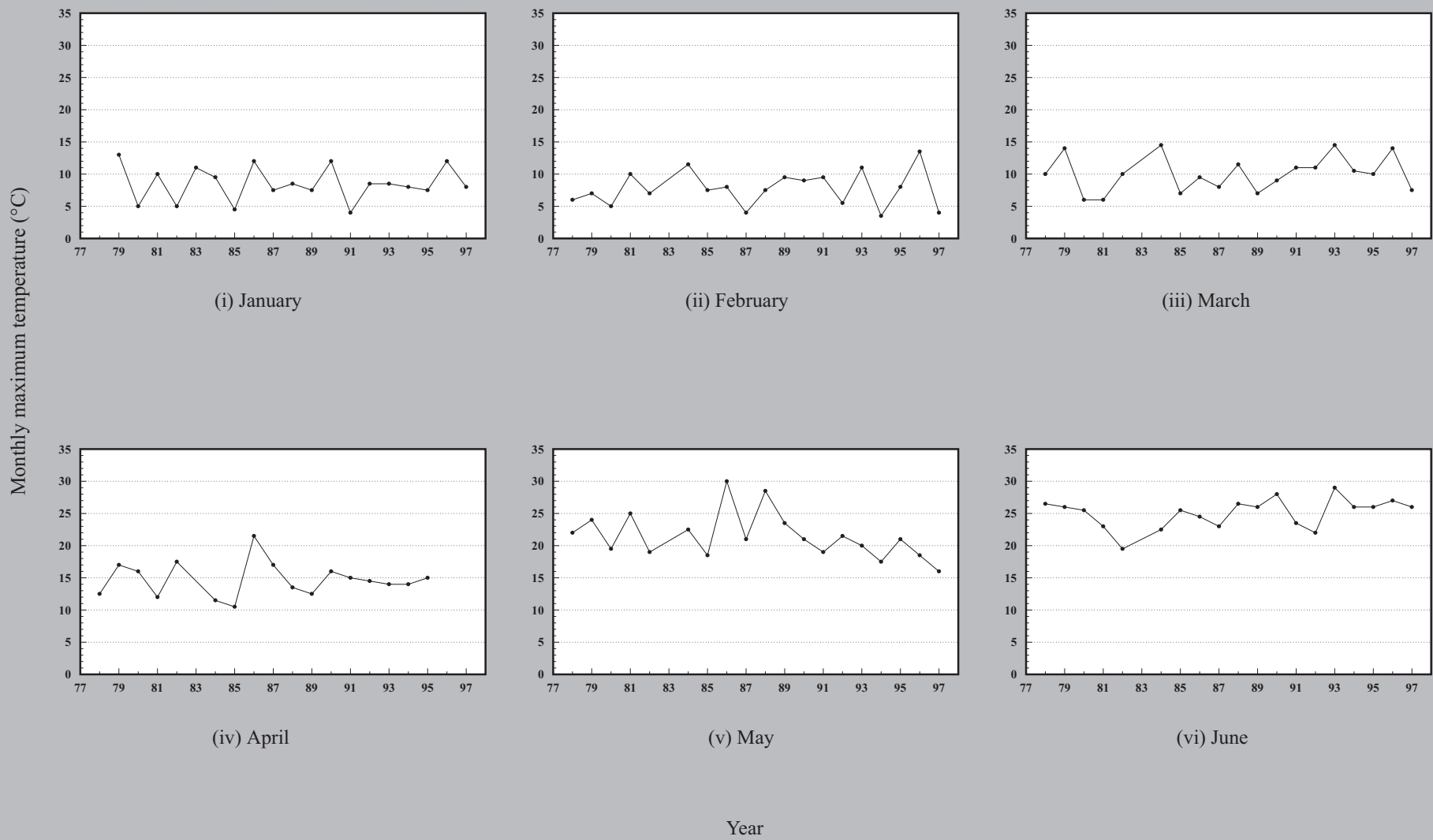


Fig. 2A-9a. Monthly maximum temperature (°C) for Clarenville, 1978 - 1997. (missing data may not allow estimation for some years)

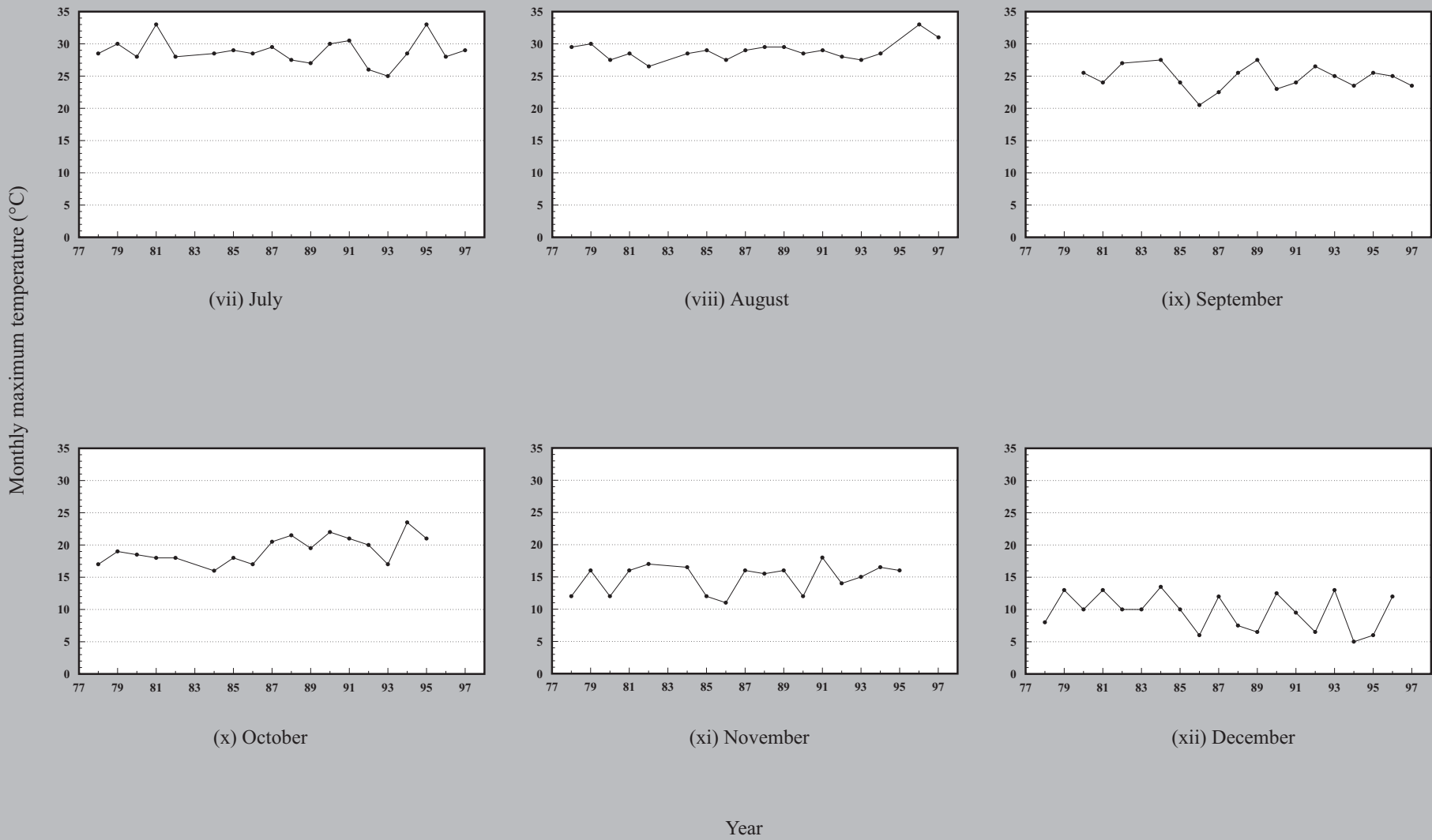


Fig. 2A-9a (con'd). Monthly maximum temperature (°C) for Clarenville, 1978 - 1997. (missing data may not allow estimation for some years)

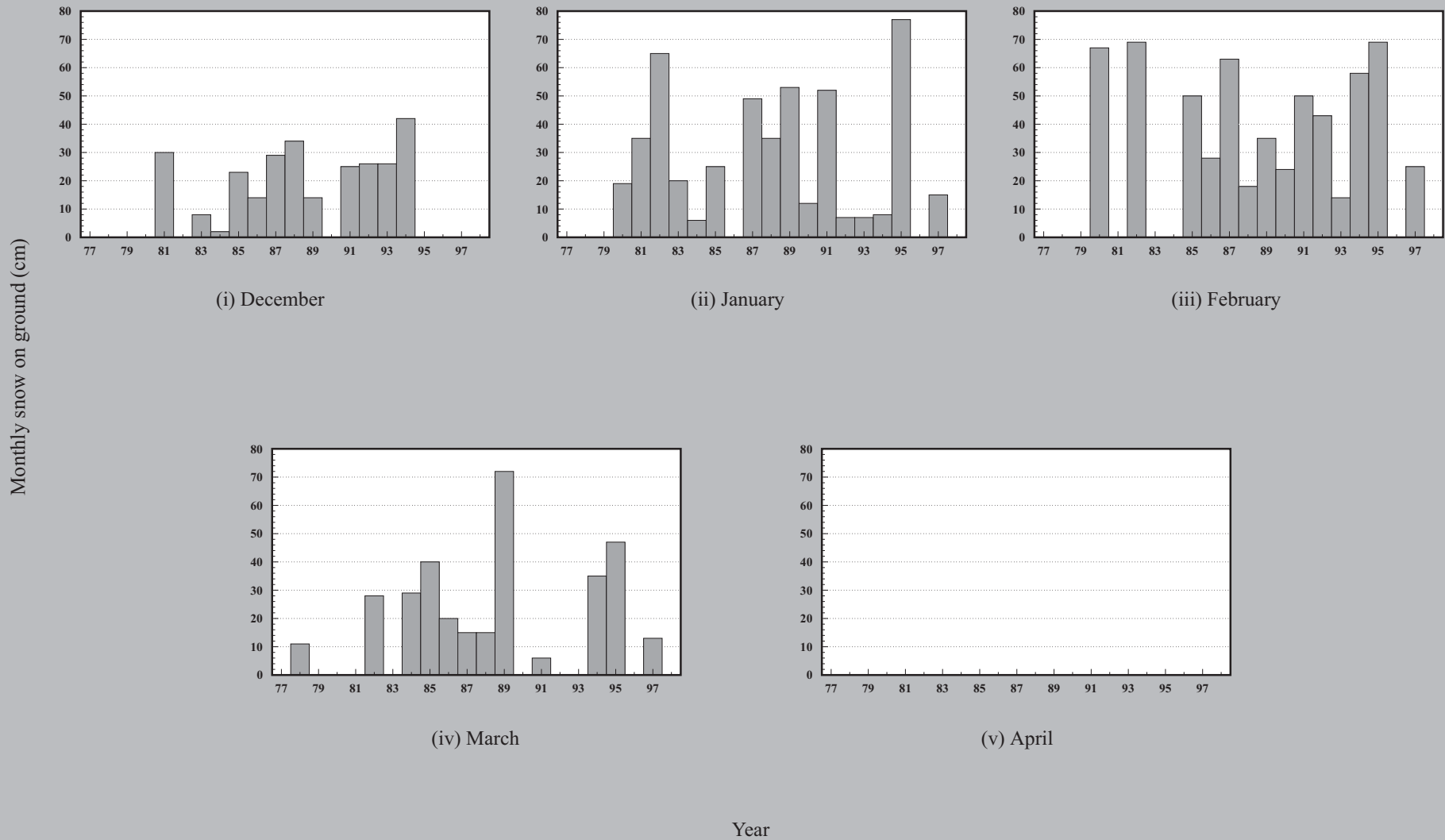
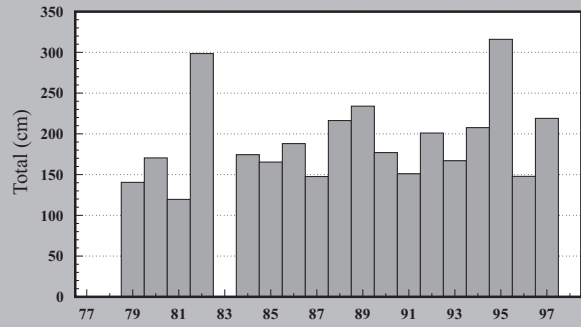
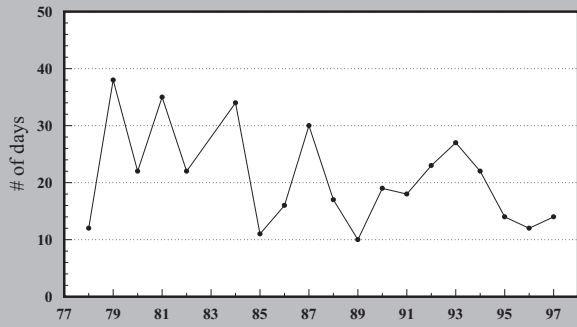


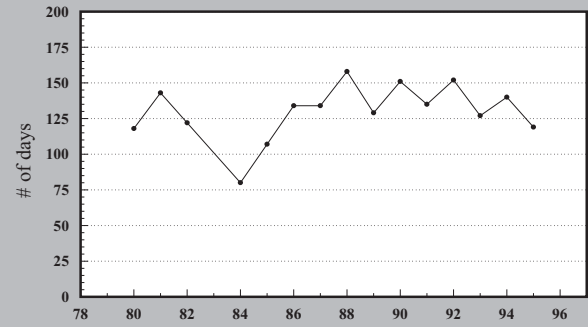
Fig. 2A-9b. Snow depth (cm) on ground on the last day of the month for Clarenville 1978-1997. (missing data may not allow estimation for some years)



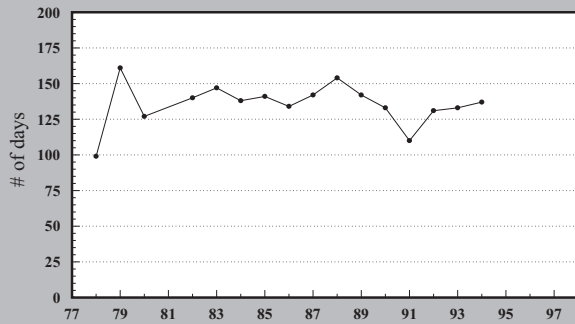
c. Snowfall



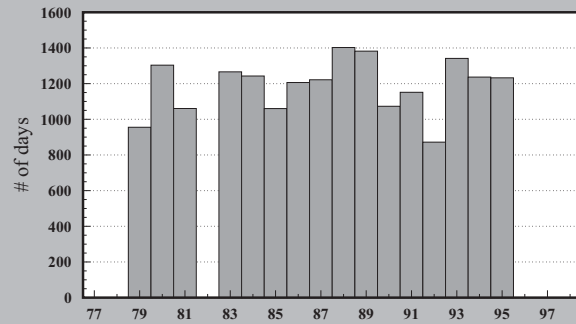
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-9c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Clarendville, 1978 - 1997. (missing data may not allow estimation for some years)

Table 2A-9a. Monthly maximum temperature (°C) for Corner Brook.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	8.3	4.4	13.3	15.0	27.2	26.7	28.3	27.8	23.9	21.1	20.0	15.0
1951	10.6	12.2	14.4	16.1	23.3	31.1	30.6	29.4	23.9	17.8	21.1	9.4
1952	7.8	-	7.8	14.4	23.9	25.0	29.4	27.8	24.4	18.9	12.2	10.6
1953	8.9	9.4	10.6	14.4	18.9	30.6	27.8	26.1	26.1	18.3	16.7	12.2
1954	8.3	11.1	11.1	15.0	19.4	27.2	24.4	23.3	24.4	19.4	18.3	11.1
1955	6.7	11.7	10.6	12.2	17.2	28.3	31.1	26.1	26.1	17.8	10.6	2.8
1956	12.2	7.2	8.3	14.4	17.2	24.4	26.1	24.4	23.3	19.4	15.0	9.4
1957	8.9	5.0	6.7	10.0	16.1	29.4	28.3	25.6	22.2	20.6	14.4	16.1
1958	10.0	7.8	6.7	19.4	21.7	22.8	28.9	27.8	23.9	20.0	16.1	6.7
1959	11.1	9.4	5.6	15.0	21.1	26.7	32.2	30.0	26.1	17.2	18.9	11.7
1960	10.6	10.6	6.7	11.1	23.3	28.9	27.8	28.9	26.7	16.7	13.3	11.7
1961	-	1.7	7.8	11.1	25.0	26.1	28.9	28.3	25.6	20.0	16.1	8.9
1962	8.3	9.4	13.9	15.6	20.6	30.0	27.2	28.3	22.8	16.7	19.4	13.3
1963	11.7	6.1	15.6	17.2	23.3	24.4	29.4	26.1	21.7	20.0	16.7	9.4
1964	7.2	5.6	11.7	13.3	25.6	23.3	30.0	24.4	25.0	18.3	12.2	13.9
1965	5.6	8.9	6.1	11.1	17.8	27.2	27.8	26.7	27.8	17.8	13.3	10.0
1966	5.0	6.1	15.6	9.4	25.6	25.6	27.8	27.8	25.0	19.4	19.4	14.4
1967	5.0	4.4	7.2	12.2	17.2	26.7	29.4	29.4	24.4	22.2	21.7	10.0
1968	7.8	9.4	12.2	17.8	23.3	21.1	28.3	26.7	23.3	25.0	8.9	5.6
1969	7.8	8.9	8.3	10.0	17.2	27.8	26.7	27.8	22.2	17.8	18.3	14.4
1970	2.2	12.2	7.2	10.6	20.0	26.1	31.1	31.1	20.6	22.2	18.3	6.7
1971	5.6	10.0	8.9	15.6	24.4	26.1	28.3	31.1	22.8	17.8	13.3	4.4
1972	8.3	6.7	12.2	8.9	22.8	26.7	30.6	24.4	25.6	18.9	11.7	11.7
1973	7.2	8.9	8.9	14.4	21.7	24.4	29.4	26.7	23.3	17.2	12.8	16.7
1974	6.1	9.4	8.9	13.3	13.3	26.7	27.8	28.9	23.3	20.0	12.2	11.7
1975	4.4	6.1	12.8	13.3	20.0	27.8	30.6	30.0	25.6	17.8	16.7	8.3
1976	6.7	11.7	15.6	14.4	23.3	28.3	30.0	32.8	25.6	22.2	15.6	12.8
1977	11.7	11.7	15.6	15.6	21.1	26.7	26.7	27.2	22.2	20.0	20.0	13.3
1978	13.0	8.0	10.0	16.0	21.0	27.5	28.5	29.0	21.0	20.0	13.0	11.0

Table 2A-9a (con'd). Monthly maximum temperature (°C) for Corner Brook.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1979	12.5	10.0	18.5	18.5	26.5	27.0	29.0	29.5	26.5	19.0	17.0	12.5
1980	8.5	4.0	6.5	15.5	20.0	31.0	29.5	26.0	22.5	19.5	13.5	7.0
1981	9.0	13.0	8.5	17.0	21.5	26.0	29.5	26.5	26.5	20.5	17.5	12.0
1982	5.0	7.0	10.5	19.5	22.5	22.0	31.0	28.5	28.0	19.5	16.5	10.5
1983	13.5	8.0	14.0	20.5	22.5	28.0	32.0	27.0	28.0	22.0	17.5	9.5
1984	8.5	9.5	14.5	16.0	26.0	22.5	30.0	30.0	22.5	12.5	16.0	13.0
1985	4.5	7.0	7.0	15.5	21.0	26.0	30.0	27.0	23.0	18.0	12.0	13.5
1986	14.5	7.5	13.0	22.5	23.5	28.5	28.5	27.0	21.5	17.0	13.5	7.0
1987	4.0	3.5	12.0	17.0	22.0	24.0	31.5	27.5	24.5	24.0	17.0	10.0
1988	6.5	7.0	15.5	15.0	24.0	30.0	27.5	30.5	24.0	18.5	14.5	5.0
1989	7.5	9.5	11.5	16.0	23.0	27.0	32.0	29.0	27.5	19.0	19.0	3.5
1990	12.5	5.5	9.5	16.0	21.0	29.0	30.0	30.5	25.5	21.5	13.0	14.0
1991	2.5	8.0	10.5	13.5	21.0	28.5	30.5	30.0	24.0	21.5	17.5	9.0
1992	9.0	4.5	13.5	15.5	26.5	27.0	28.0	26.5	25.0	20.5	15.0	7.0
1993	6.0	9.5	11.0	20.0	25.0	25.5	27.0	29.0	25.5	19.0	15.0	13.0
1994	10.5	5.5	10.5	15.5	18.5	25.5	29.0	28.0	21.0	21.5	16.0	4.5
1995	-	8.5	10.0	15.5	23.0	26.0	29.0	32.0	24.0	24.0	18.5	8.5
1996	13.0	14.0	12.0	20.5	17.5	27.5	27.0	32.5	-	19.5	18.5	14.5
1997	10.5	3.5	7.0	10.0	17.0	27.5	28.0	28.5	25.0	-	-	-
Normal	-2.1	-2.9	1.2	6.2	11.9	17.5	21.9	21.0	16.4	10.6	5.4	0.4

Table 2A-9b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Corner Brook.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	18	-	-	-	-	-	-
1951	34	285.0	-	-	-	-	-
1952	24	311.6	38	-	-	-	-
1953	38	188.3	23	15	18	-	-
1954	22	418.8	28	137	0	15	-
1955	31	347.1	18	71	13	3	0
1956	28	542.3	15	13	56	10	0
1957	17	511.4	-	30	46	0	-
1958	40	233.4	30	-	20	-	-
1959	11	305.6	-	30	30	23	-
1960	17	173.7	-	-	-	-	-
1961	3	380.7	-	-	-	-	-
1962	19	308.6	18	-	-	-	-
1963	19	354.1	51	10	56	10	0
1964	11	443.5	3	56	64	23	0
1965	14	400.5	51	30	-	15	-
1966	12	253.6	-	-	-	-	-
1967	9	397.8	-	-	-	-	-
1968	26	283.1	-	-	-	-	0
1969	21	263.2	-	-	-	-	-
1970	9	373.7	-	-	-	-	0
1971	15	415.4	-	-	-	-	0
1972	11	390.4	-	-	-	-	-
1973	13	474.3	-	-	-	-	-
1974	20	427.2	38	-	-	-	-
1975	10	396.0	20	53	-	53	0
1976	19	390.4	28	23	64	0	0
1977	14	404.1	15	30	27	0	0
1978	16	493.4	37	55	48	35	0
1979	36	314.0	17	0	12	0	0
1980	25	323.6	27	97	90	25	0
1981	37	243.6	-	40	0	2	0
1982	25	393.6	4	96	116	58	0
1983	37	275.5	22	25	53	16	0
1984	26	360.4	17	52	21	10	0
1985	16	398.5	22	90	62	46	3
1986	36	311.6	45	28	58	-	0
1987	24	359.8	65	74	107	36	0

Table 2A-9b (con'd). Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Corner Brook.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1988	32	403.8	49	71	78	28	0
1989	19	341.4	42	76	51	46	0
1990	24	346.0	20	47	69	48	0
1991	22	299.2	50	72	69	19	0
1992	17	405.9	52	33	70	57	0
1993	17	353.8	64	87	75	62	0
1994	29	394.4	40	40	65	41	0
1995	29	376.1	4	-	68	37	-
1996	30	263.2	14	7	9	-	0
1997	23	389.2	-	37	66	53	26
Normal	-	-	30	-	-	-	0

Table 2A-9c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Corner Brook.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	130	1260.8	149
1951	138	1357.5	142
1952	153	1366.2	146
1953	158	1114.8	129
1954	115	881.4	113
1955	138	1229.0	149
1956	99	1041.8	123
1957	144	1133.5	143
1958	150	1228.4	150
1959	149	1165.6	120
1960	163	1467.8	170
1961	156	1408.4	151
1962	148	1042.8	127
1963	132	1153.2	133
1964	151	1118.9	145
1965	125	1164.5	123
1966	156	1414.5	164
1967	176	1506.6	139
1968	163	1248.6	157
1969	140	1153.3	128
1970	170	1398.0	147
1971	155	1343.4	146

Table 2A-9c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for Corner Brook.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1972	125	1092.5	122
1973	174	1315.9	139
1974	152	1156.0	131
1975	154	1337.9	139
1976	147	1315.6	128
1977	163	1385.7	150
1978	148	1193.6	130
1979	156	1495.6	155
1980	162	1137.0	142
1981	164	1318.7	145
1982	140	1184.5	136
1983	138	1389.6	144
1984	174	1422.9	121
1985	157	1374.5	147
1986	115	1139.7	142
1987	145	1387.7	145
1988	171	1339.1	145
1989	173	1602.1	170
1990	154	1434.3	132
1991	159	1105.5	122
1992	142	1130.2	123
1993	152	1140.3	130
1994	129	1290.8	130
1995	144	1300.5	142
1996	163	1349.0	141
1997	-	1247.0	129
Normal	-	1432.0	-

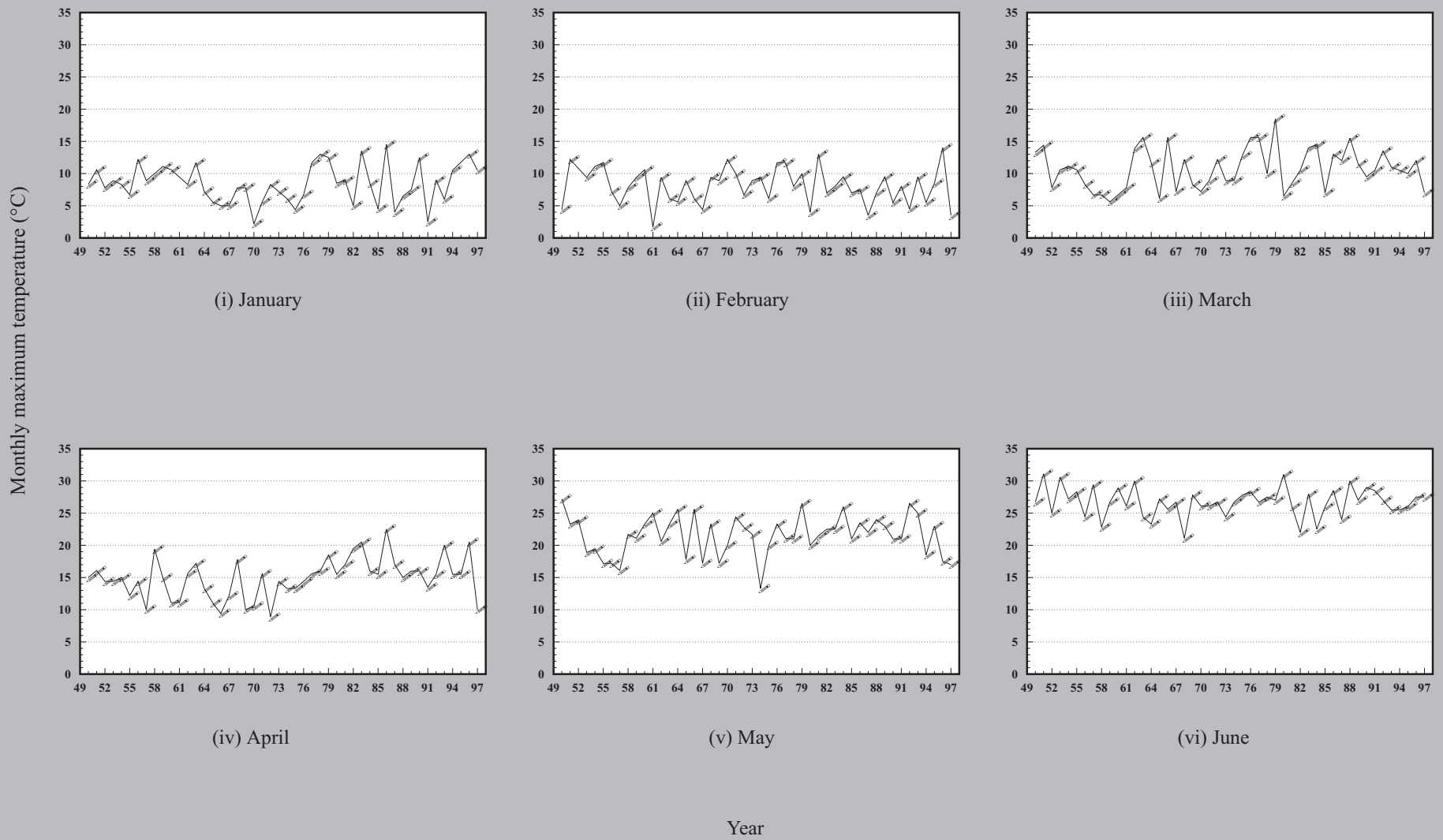


Fig. 2A-10a. Monthly maximum temperature (°C) for Corner Brook, 1950 - 1997. (missing data may not allow estimation for some years)

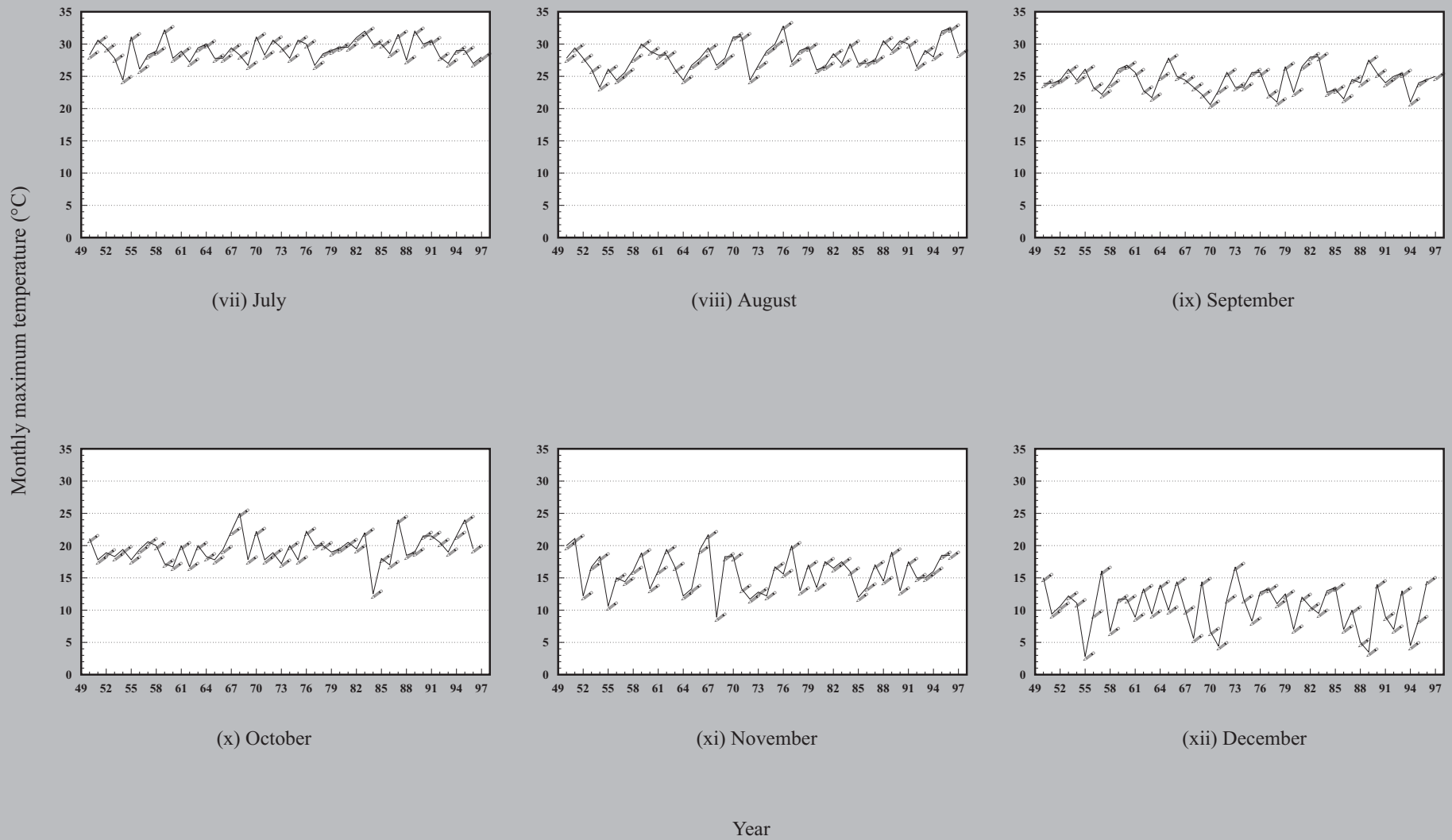


Fig. 2A-10a (continued). Monthly maximum temperature (°C) for Corner Brook, 1950 - 1997. (missing data may not allow estimation for some years)

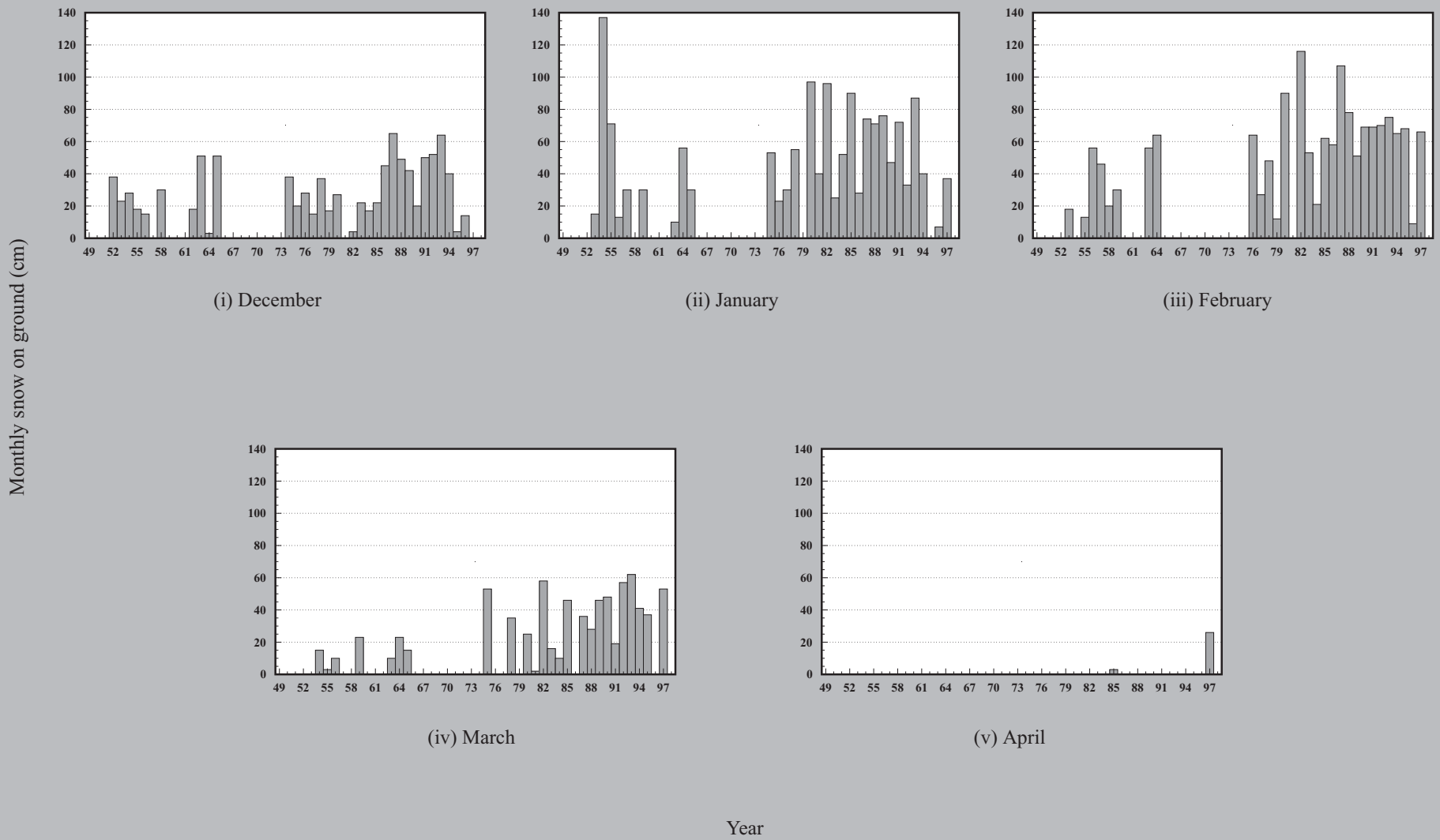
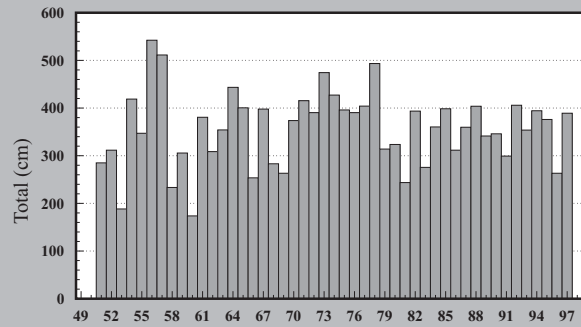
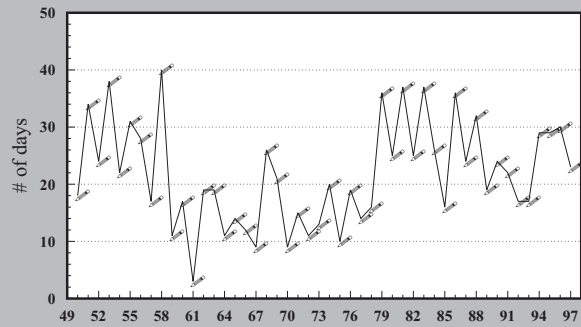


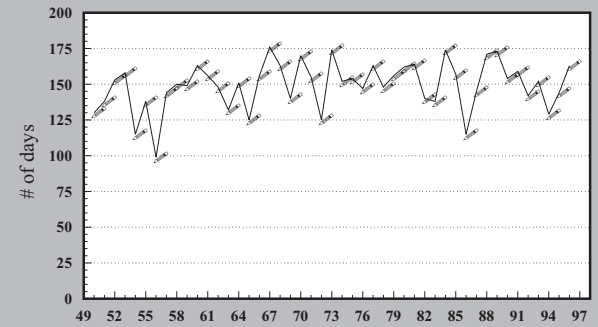
Fig. 2A-10b. Snow depth (cm) on ground on the last day of the month for Corner Brook, 1950 - 1997. (missing data may not allow estimation for some years)



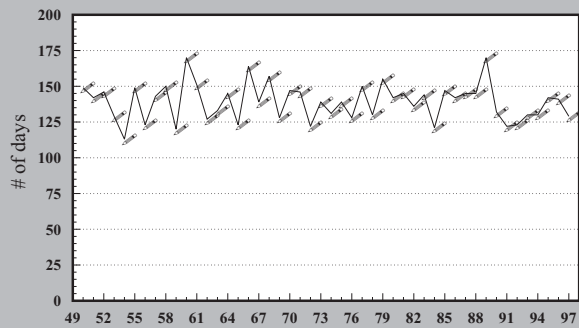
c. Snowfall



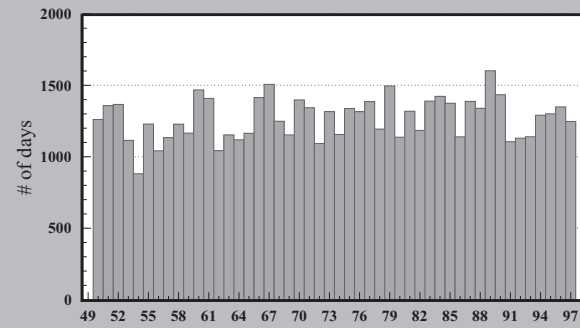
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-10c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Corner Brook, 1950 - 1997. (missing data may not allow estimation for some years)

Table 2A-10a. Monthly maximum temperature (°C) for Daniel's Harbour.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	7.2	1.7	9.4	12.2	-	21.7	22.8	22.2	17.2	20.6	18.9	15.6
1951	-	11.7	12.8	17.2	20.6	25.6	22.8	-	-	12.8	16.7	-
1952	-	-	6.1	9.4	20.6	20.0	28.9	26.7	26.1	17.2	13.9	11.7
1953	10.0	10.6	12.2	12.8	16.7	20.0	25.0	22.8	22.8	15.0	20.6	11.7
1954	9.4	12.2	13.3	13.9	20.6	23.9	23.9	18.3	23.3	20.6	16.7	13.3
1955	5.6	12.2	12.2	9.4	-	21.1	24.4	-	20.6	18.3	10.0	2.2
1956	12.8	4.4	7.2	13.3	13.3	18.9	20.0	20.6	22.8	17.8	16.1	8.9
1957	2.2	2.8	5.0	5.6	12.8	25.6	23.3	23.3	20.0	14.4	15.0	15.6
1958	13.3	7.8	11.7	17.8	21.7	20.6	21.1	20.6	21.7	18.3	13.9	5.0
1959	8.9	8.3	3.9	15.0	13.3	23.9	22.8	25.0	18.9	18.9	18.3	10.0
1960	8.9	8.3	3.3	13.3	17.8	21.1	26.1	23.9	27.2	16.7	13.3	11.1
1961	-0.6	-2.8	5.6	7.8	20.0	23.9	23.9	21.7	25.6	18.9	15.0	9.4
1962	6.1	10.0	11.1	15.6	13.9	19.4	20.6	23.3	18.3	13.3	20.0	11.1
1963	12.2	6.1	11.7	9.4	21.7	18.9	23.3	25.6	17.8	18.9	17.8	16.7
1964	7.2	4.4	12.8	7.8	15.0	20.6	22.8	22.2	21.1	18.3	11.7	16.1
1965	4.4	7.2	7.2	8.9	12.8	23.9	21.7	23.3	21.7	14.4	13.9	8.3
1966	3.9	1.7	11.1	7.8	24.4	21.1	28.3	23.9	21.7	17.2	21.1	16.7
1967	3.9	2.2	2.8	10.6	17.2	20.6	23.3	23.9	20.6	21.1	20.0	8.9
1968	7.8	11.1	9.4	16.7	18.3	18.3	21.7	22.8	18.9	23.3	7.8	7.8
1969	10.6	8.9	8.3	8.9	16.1	20.0	23.9	23.9	20.0	16.7	19.4	15.0
1970	2.8	13.3	6.7	7.8	15.0	21.1	22.2	23.3	17.8	18.9	17.8	7.2
1971	3.3	12.2	8.3	13.3	23.3	19.4	22.2	23.9	26.1	16.1	17.2	4.4
1972	10.0	7.8	15.6	8.3	16.7	21.1	23.3	21.7	22.8	22.8	10.6	12.8
1973	6.7	8.9	5.0	11.1	16.1	19.4	27.8	20.6	18.3	15.0	13.3	18.3
1974	7.2	7.2	9.4	7.8	12.2	18.3	19.4	21.7	19.4	17.2	10.0	11.7
1975	3.9	5.0	9.4	16.1	13.9	17.2	26.7	21.1	27.2	17.2	18.9	12.2
1976	10.6	13.9	11.7	15.6	22.8	18.3	22.8	25.6	25.0	15.6	8.9	9.4
1977	9.5	7.4	8.9	9.3	14.3	24.5	22.1	21.8	18.5	18.8	21.4	12.7
1978	10.9	6.2	7.1	7.8	13.4	20.4	25.6	22.1	17.4	17.6	8.8	7.8

Table 2A-10a (con'd). Monthly maximum temperature (°C) for Daniel's Harbour.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1979	15.8	9.4	14.4	15.7	22.1	22.9	22.2	22.2	18.7	18.2	11.2	11.0
1980	9.2	4.0	5.8	15.6	12.8	22.0	25.1	20.4	19.9	15.2	12.1	5.7
1981	9.1	14.9	8.8	12.2	20.5	22.5	21.4	23.1	21.3	22.4	16.5	11.9
1982	5.1	0.4	9.0	13.2	18.3	19.4	22.5	20.5	18.0	13.4	16.8	10.2
1983	9.9	9.2	11.3	19.2	20.5	21.4	25.3	22.9	22.8	17.7	16.5	7.7
1984	7.4	5.0	11.0	12.0	19.6	20.4	23.6	25.7	22.7	10.7	14.6	11.3
1985	4.4	3.6	5.8	10.2	19.0	17.5	25.8	22.0	16.5	15.5	9.5	7.0
1986	14.0	5.5	5.5	15.0	15.6	21.6	23.5	21.0	19.1	10.2	6.0	-
1987	12.0	3.7	8.9	10.2	16.8	20.6	23.0	22.0	22.0	19.9	15.0	6.5
1988	3.6	6.0	12.1	11.5	17.1	-	-	-	18.8	16.4	13.2	3.7
1989	9.0	5.4	10.5	14.0	20.3	21.5	23.6	24.4	26.0	18.6	18.9	2.5
1990	9.2	2.5	3.6	12.6	20.6	21.5	21.0	25.0	21.5	19.6	12.5	7.2
1991	-0.5	10.4	9.1	9.2	13.4	23.8	20.5	25.2	21.3	20.0	16.6	5.6
1992	10.0	1.7	12.5	9.7	17.1	25.0	22.0	21.9	24.4	19.2	14.0	5.0
1993	8.7	9.0	7.8	17.8	20.0	21.4	23.2	22.0	22.2	19.9	16.1	12.0
1994	9.5	2.0	10.5	13.7	17.5	21.7	28.8	27.0	20.0	18.0	13.9	5.2
1995	4.1	8.1	5.0	14.4	18.2	20.0	27.0	23.0	19.0	20.0	18.5	6.4
1996	15.5	13.0	9.5	20.7	18.0	20.1	-	-	-	-	-	-
Normal	-3.7	-4.5	-1.0	3.6	8.7	13.3	17.5	17.6	14.0	8.9	4.4	-0.7

Table 2A-10b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Daniel's Harbour.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	12	193.5	28	-	-	-	-
1951	19	301.7	-	-	-	-	-
1952	11	114.3	8	13	-	-	-
1953	27	217.9	15	71	-	41	-
1954	11	160.6	56	20	-	3	-
1955	12	168.8	5	3	20	10	-
1956	5	225.4	-	53	91	33	10
1957	6	76.2	18	-	15	-	-
1958	17	182.9	15	30	36	53	-
1959	6	181.9	23	41	-	38	-
1960	9	239.3	-	89	89	30	-
1961	4	214.0	41	18	-	3	10
1962	6	248.1	33	5	61	20	-
1963	4	510.2		15	86	30	-
1964	9	389.3	104	28	36	61	3
1965	10	387.6	25	30	66	5	-
1966	17	527.4	8	43	124	94	33
1967	12	423.0	28	53	43	8	-
1968	24	307.2	-	25	-	3	-
1969	27	353.3	36	46	38	30	3
1970	13	489.2	58	97	119	122	5
1971	23	456.5	30	64	43	15	-
1972	17	425.7	13	46	99	76	-
1973	15	422.1	23	36	71	112	43
1974	19	307.8	3	69	61	53	-
1975	15	401.4	81	20	28	3	15
1976	17	452.9	11	80	59	25	1
1977	14	481.0	33	52	50	60	1
1978	15	340.4	2	-	45	-	-
1979	22	423.7	28	52	70	27	-
1980	17	327.0	27	62	-	-	-
1981	32	496.1	2	64	97	75	1
1982	20	329.6	8	52	25	24	-
1983	31	417.1	23	50	36	23	-
1984	23	397.0	9	100	90	63	10
1985	9	283.7	23	31	87	8	-
1986	26	233.5	36	103	159	73	-
1987	11	199.2	12	73	109	4	-

Table 2A-10b (con'd). Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Daniel's Harbour.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1988	9	288.1	49	21	51	56	1
1989	12	355.0	24	28	72	32	1
1990	17	384.0	25	54	42	2	1
1991	15	400.3	16	9	72	12	2
1992	16	319.9	50	39	42	13	-
1993	17	373.9	7	7	32	14	
1994	28	383.3	4	39	45	35	5
1995	20	324.0	-	6	13	3	-
1996	27	-	-	-	-	-	-
Normal	16	378.9	26	48	66	38	4

Table 2A-10c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Daniel's Harbour.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	-	957.1	137
1951	129	-	136
1952	154	1224.1	150
1953	165	896.8	118
1954	148	886.2	113
1955	158	730.7	114
1956	111	741.9	89
1957	153	884.3	117
1958	149	986.4	135
1959	115	894.1	105
1960	171	1035.0	141
1961	152	1049.0	131
1962	115	789.4	111
1963	123	749.4	94
1964	141	835.1	136
1965	127	849.4	113
1966	137	974.8	138
1967	128	1100.7	124
1968	128	833.8	128
1969	147	864.2	122
1970	107	879.5	107
1971	145	795.7	94
1972	124	862.4	121

Table 2A-10c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for Daniel's Harbour.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1973	120	884.6	107
1974	105	728.4	105
1975	112	971.9	112
1976	144	914.1	120
1977	154	904.1	112
1978	123	854.0	119
1979	156	1026.3	144
1980	153	761.4	113
1981	156	913.0	119
1982	132	844.8	117
1983	146	1004.6	132
1984	162	872.1	103
1985	145	941.6	132
1986	136	768.7	124
1987	165	970.4	138
1988	149	-	141
1989	154	1076.2	133
1990	130	1001.3	130
1991	139	697.0	106
1992	91	804.1	116
1993	151	765.6	125
1994	130	999.9	125
1995	131	906.2	124
1996	-	-	125
Normal	-	1013.0	-

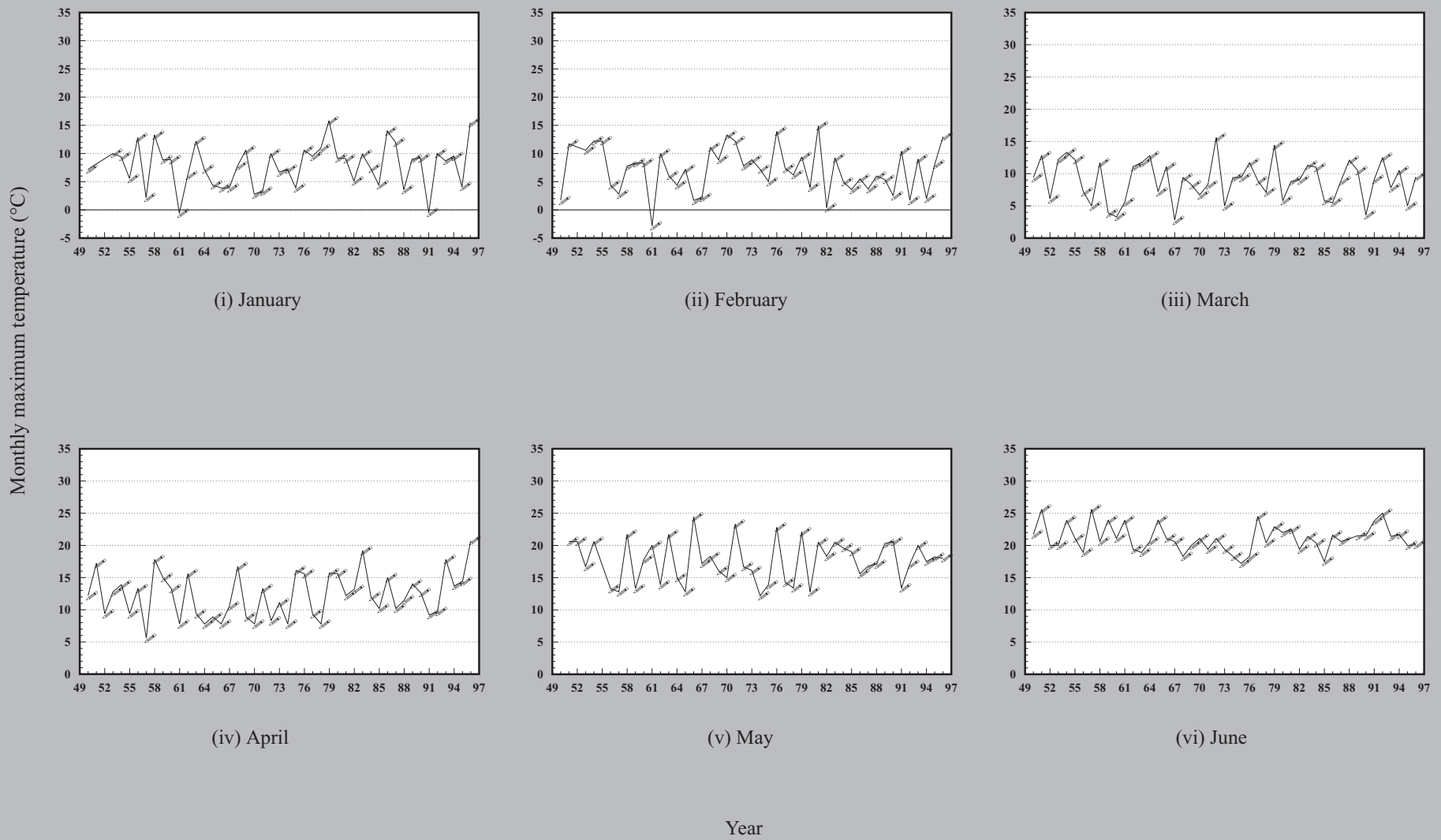


Fig. 2A-11a. Monthly maximum temperature (°C) for Daniel's Harbour, 1950 - 1996. (missing data may not allow estimation for some years)

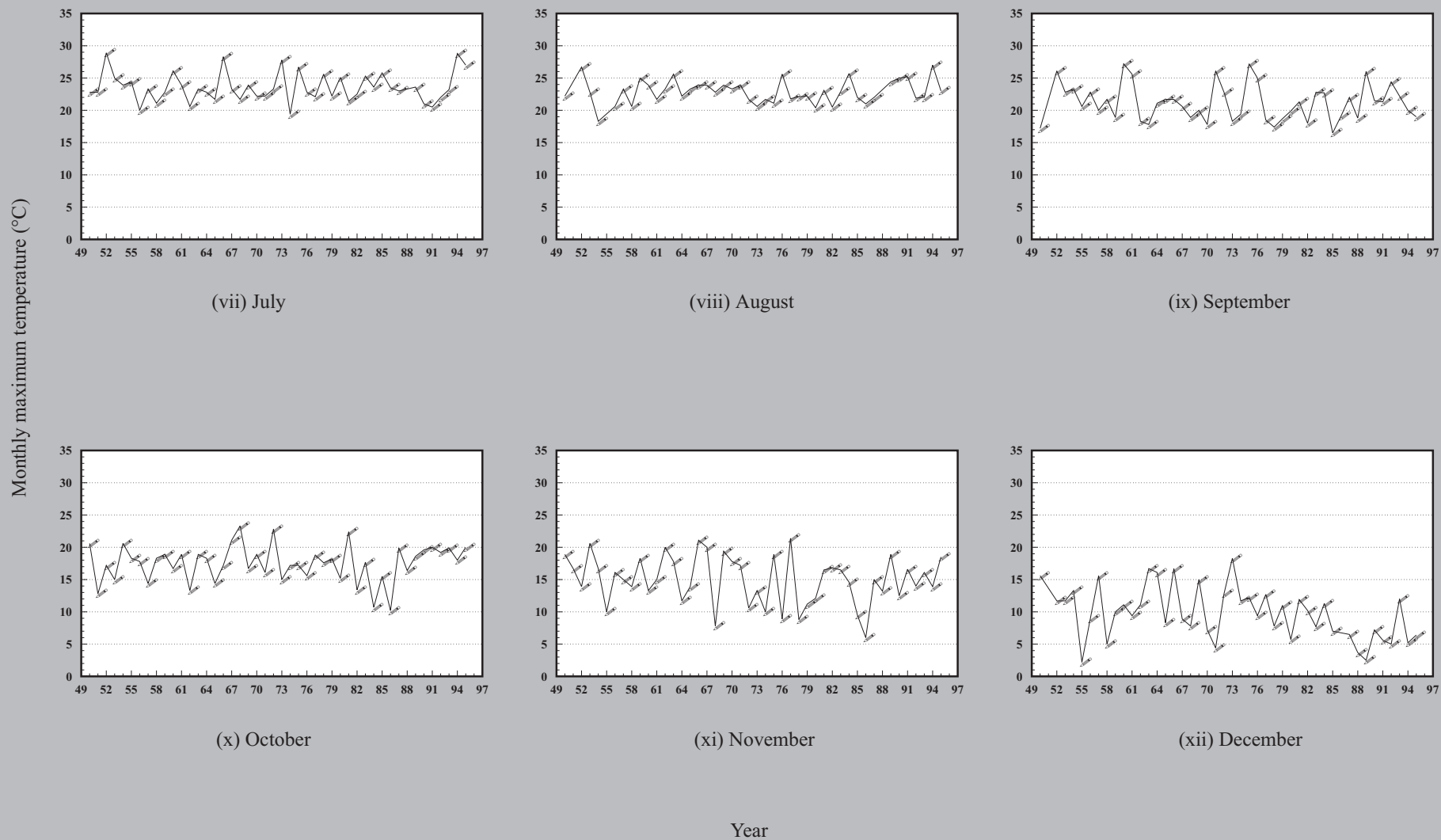


Fig. 2A-11a (con'd). Monthly maximum temperature (°C) for Daniel's Harbour, 1950 - 1996. (missing data may not allow estimation for some years)

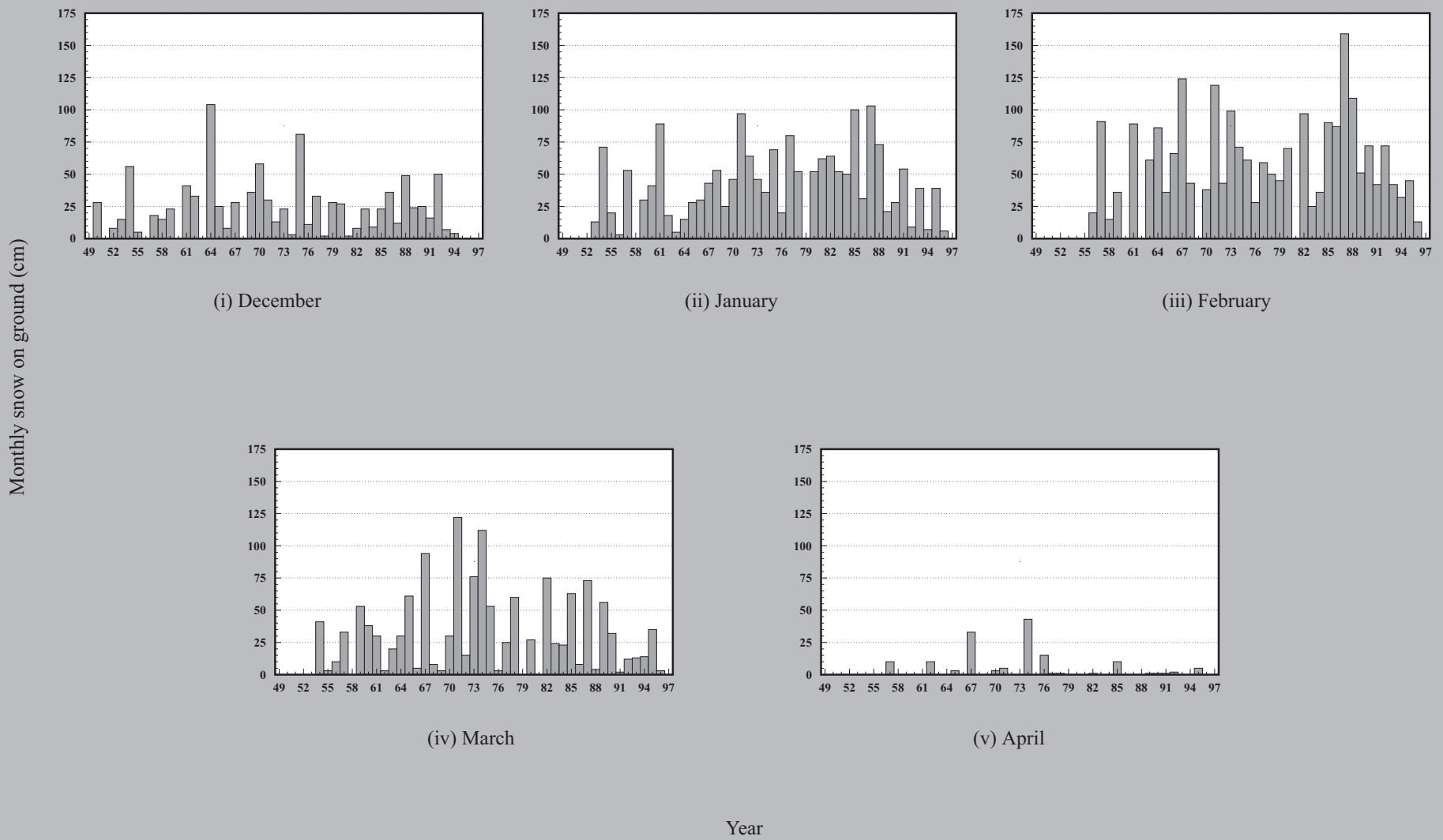
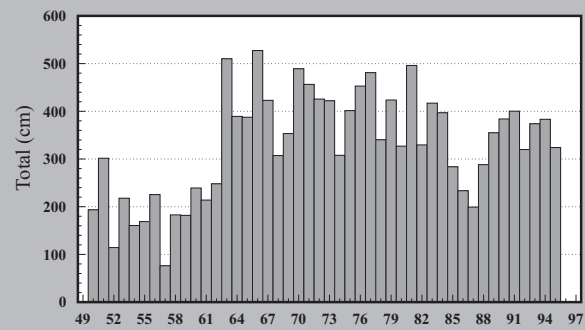
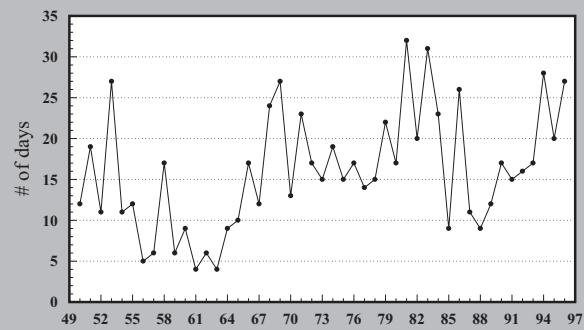


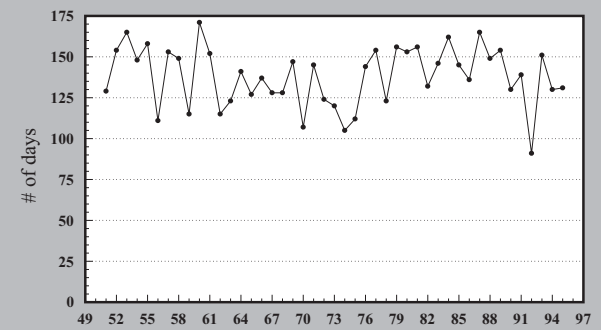
Fig. 2A-11b. Snow depth (cm) on ground on the last day of the month for Daniel's Harbour, 1950 - 1996. (missing data may not allow estimation for some years)



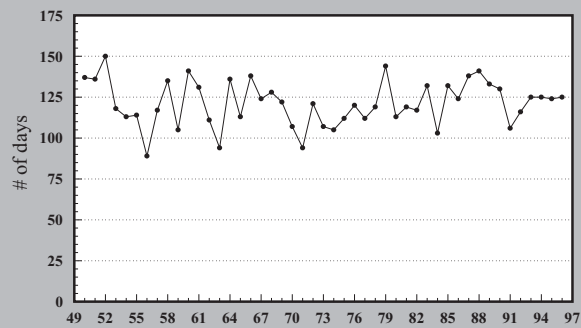
c. Snowfall



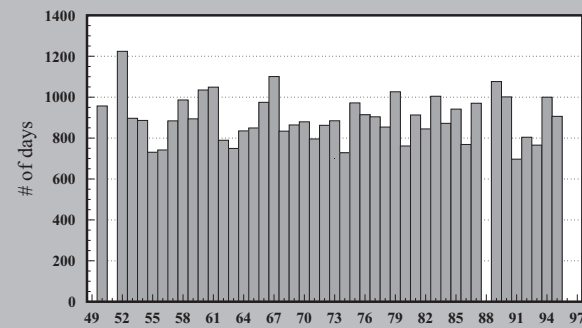
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-11c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Daniel's Harbour, 1950 - 1996. (missing data may not allow estimation for some years)

Table 2A-11a. Monthly maximum temperature (°C) for Deer Lake.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	8.3	2.8	11.1	14.4	26.1	-	28.3	28.3	23.3	20.6	21.1	14.4
1951	10.6	12.8	13.3	16.7	23.3	31.7	30.6	29.4	26.7	16.7	17.8	9.4
1952	7.2	6.7	6.7	16.1	22.2	22.8	35.6	27.8	24.4	-	14.4	10.6
1953	10.6	-	11.1	-	21.7	-	29.4	28.3	28.9	-	18.9	12.8
1954	7.8	11.7	11.1	18.3	21.7	30.0	27.8	25.6	25.0	19.4	20.6	15.6
1955	5.0	10.0	8.9	-	18.3	28.9	30.6	24.4	26.1	17.8	10.0	3.9
1956	10.0	4.4	11.7	13.9	18.9	25.6	27.2	-	23.9	18.3	15.6	8.9
1957	2.8	7.8	11.1	15.6	15.6	29.4	28.9	23.9	21.1	20.6	15.0	13.9
1958	6.1	7.2	8.3	20.0	24.4	23.9	27.8	27.2	25.0	18.9	12.8	3.9
1959	6.7	3.3	3.9	16.7	21.7	26.7	32.2	28.9	25.6	17.2	17.8	7.2
1960	9.4	8.9	2.8	11.7	27.8	-	29.4	29.4	27.2	16.1	12.2	10.0
1961	-	1.7	8.9	11.7	25.0	26.1	28.3	28.3	25.6	21.7	15.0	8.3
1962	7.2	8.9	13.3	12.2	19.4	29.4	26.1	28.9	24.4	16.1	18.9	12.2
1963	9.4	3.3	12.8	18.3	26.7	24.4	28.3	25.0	20.0	17.2	15.0	9.4
1964	6.1	3.3	10.6	12.8	22.8	23.9	27.8	25.0	24.4	17.8	10.0	13.9
1965	2.8	6.1	5.6	11.7	18.3	26.7	28.3	27.2	25.6	15.6	13.3	8.3
1966	3.3	3.9	16.7	14.4	25.6	26.7	28.3	27.2	23.3	19.4	18.3	13.3
1967	3.9	3.3	10.0	8.3	16.7	29.4	28.9	28.3	23.3	22.2	20.0	8.3
1968	6.7	5.6	10.6	17.2	21.1	22.2	28.3	-	25.0	23.3	-	7.2
1969	6.7	7.8	8.9	16.1	18.3	25.6	28.3	-	21.1	-	17.8	16.1
1970	-	12.2	-	12.2	21.1	26.7	31.7	31.7	22.2	22.8	18.9	6.1
1971	5.6	10.0	9.4	11.7	-	27.8	28.9	28.9	23.3	17.8	17.2	4.4
1972	8.9	7.2	11.1	11.7	22.2	27.2	29.4	27.8	28.3	18.9	12.8	11.1
1973	8.3	8.9	10.0	13.9	23.3	26.1	28.3	27.8	25.6	17.8	12.2	16.7
1974	5.6	7.2	7.2	11.1	14.4	27.8	29.4	28.9	23.3	19.4	11.7	11.1
1975	3.9	5.6	12.2	10.6	22.2	27.2	32.2	30.6	-	17.8	16.1	11.1
1976	10.6	13.3	15.6	15.6	25.6	27.2	28.9	32.2	23.3	21.1	10.0	10.0
1977	10.0	8.9	12.2	-	25.6	28.3	27.8	29.4	21.1	18.3	18.9	11.1
1978	10.6	4.4	7.2	12.2	21.1	28.0	30.0	27.5	20.0	18.0	12.5	9.0

Table 2A-11a (con'd). Monthly maximum temperature (°C) for Deer Lake.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1979	13.0	6.5	17.0	23.0	26.0	28.0	29.0	28.0	26.0	19.0	16.5	12.0
1980	6.0	5.0	6.5	15.5	19.5	28.0	29.0	26.5	22.5	18.0	12.0	5.0
1981	9.0	13.0	7.0	15.0	23.0	27.0	27.5	27.5	27.5	23.0	16.5	9.0
1982	4.0	4.5	10.0	17.0	23.0	22.0	30.0	27.5	25.0	19.5	17.0	9.0
1983	12.0	7.0	13.0	19.5	23.0	27.0	32.0	27.5	27.5	20.5	16.5	9.0
1984	7.0	14.0	13.0	19.5	25.5	23.5	29.0	30.0	22.0	12.5	15.0	12.0
1985	3.0	6.0	7.5	15.5	23.5	28.5	29.0	30.5	22.5	16.5	10.0	10.0
1986	13.0	8.0	10.0	22.0	26.5	27.5	27.5	27.0	21.0	16.0	11.0	6.0
1987	0.5	2.0	11.0	17.0	21.0	24.0	29.5	27.0	23.5	22.0	14.5	8.0
1988	5.0	7.0	15.0	15.0	23.5	29.0	28.5	29.0	22.5	20.0	14.0	5.0
1989	8.0	8.0	10.0	15.5	25.0	30.5	30.0	28.5	26.5	18.0	18.5	3.0
1990	14.0	4.5	8.5	13.0	20.0	27.0	28.0	30.0	25.0	21.0	13.5	11.0
1991	0.5	6.0	10.5	15.0	21.0	28.0	29.0	29.0	23.0	20.0	15.0	8.0
1992	8.5	1.0	12.5	15.5	25.0	26.0	27.0	26.0	24.0	18.0	14.0	6.0
1993	6.0	10.0	10.5	16.5	24.0	28.0	24.5	30.0	24.5	19.0	14.0	9.5
1994	9.0	3.5	13.0	13.5	19.5	26.0	28.0	27.0	23.5	21.0	13.5	5.0
1995	10.0	8.0	9.5	12.0	22.0	27.0	29.5	31.0	22.5	21.0	18.0	6.0
1996	13.0	12.0	10.5	22.0	20.0	27.0	26.0	31.0	26.5	19.0	19.0	14.5
1997	8.0	3.0	6.0	10.5	16.5	27.0	30.0	27.5	-	-	-	-
Normal	-3.4	-3.5	0.7	6.0	12.7	18.7	23.0	21.6	16.4	10.0	4.5	-0.9

Table 2A-11b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Deer Lake.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	12	336.2	-	-	-	-	-
1951	29	139.4	-	-	-	-	-
1952	20	213.3	-	-	-	-	-
1953	32	155.3	-	-	-	-	-
1954	13	361.4	-	-	-	-	-
1955	25	212.0	-	-	-	-	-
1956	18	307.0	-	-	-	-	-
1957	10	318.0	-	-	-	-	-
1958	34	123.3	-	-	-	-	-
1959	11	174.8	-	-	-	-	-
1960	10	156.0	-	-	-	-	-
1961	6	282.4	-	-	-	-	-
1962	17	399.5	-	-	-	-	-
1963	20	337.5	-	-	-	-	-
1964	10	376.6	-	-	-	-	-
1965	16	389.4	41	-	-	-	-
1966	21	228.9	20	20	48	-	-
1967	11	312.1	-	46	107	91	23
1968	28	172.3	51	48	30	10	-
1969	18	274.3	-	51	8	-	-
1970	-	-	25	43	25	23	-
1971	16	309.1	69	43	48	91	-
1972	16	239.4	81	79	76	13	-
1973	9	295.2	10	74	163	56	8
1974	17	264.5	23	38	58	61	15
1975	15	152.4	33	74	86	38	-
1976	23	265.3	25	25	66	10	-
1977	21	280.4	12	110	90	15	-
1978	11	339.1	49	100	75	71	6
1979	38	223.0	16	1	18	1	-
1980	20	222.7	50	98	123	33	-
1981	38	183.0	20	48	-	9	-
1982	21	371.0	4	132	228	82	-
1983	28	296.6	11	46	32	13	-
1984	17	338.8	27	71	23	11	-
1985	16	323.2	36	86	54	27	-
1986	31	245.9	22	22	60	15	-
1987	25	228.2	39	112	171	35	-

Table 2A-11b (con'd). Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Deer Lake.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1988	29	312.1	65	88	77	22	-
1989	15	212.3	50	96	71	25	-
1990	20	261.7	10	67	125	36	-
1991	15	230.1	54	86	91	18	-
1992	12	349.9	50	25	102	34	2
1993	16	283.3	65	106	86	39	-
1994	21	318.0	43	27	71	43	
1995	15	339.9	-	87	119	63	13
1996	23	186.4	-	-	-	-	-
1997	16	247.8	-	26	87	46	10
Normal	22	30	65	74	32	2	-

Table 2A-11c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Deer Lake.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	-	844.8	123
1951	105	1237.6	133
1952	131	1332.2	145
1953	-	917.4	122
1954	115	1146.5	135
1955	134	1090.5	131
1956	91	509.9	90
1957	99	978.5	111
1958	106	1119.3	142
1959	112	1022.2	103
1960	-	1015.1	137
1961	105	1366.3	149
1962	106	922.5	109
1963	101	866.4	107
1964	91	936.4	117
1965	76	1100.6	122
1966	100	1177.6	132
1967	129	1405.3	129
1968	139	776.6	141
1969	117	769.6	125
1970	99	1133.0	117
1971	-	1120.0	119

Table 2A-11c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for Deer Lake.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1972	83	1105.0	123
1973	98	1048.4	97
1974	99	1024.1	114
1975	-	977.4	111
1976	125	1136.9	127
1977	105	1115.6	125
1978	88	1061.8	125
1979	147	1378.6	149
1980	108	992.1	125
1981	142	1197.5	143
1982	92	1009.0	119
1983	129	1167.8	126
1984	127	1091.3	116
1985	100	1237.4	147
1986	84	928.3	110
1987	111	1187.9	133
1988	84	1076.7	120
1989	100	1401.0	157
1990	110	1297.9	130
1991	122	1009.0	124
1992	121	1044.5	122
1993	127	895.6	105
1994	109	1202.0	129
1995	110	1137.3	135
1996	110	1175.2	123
Normal	-	1217.0	-

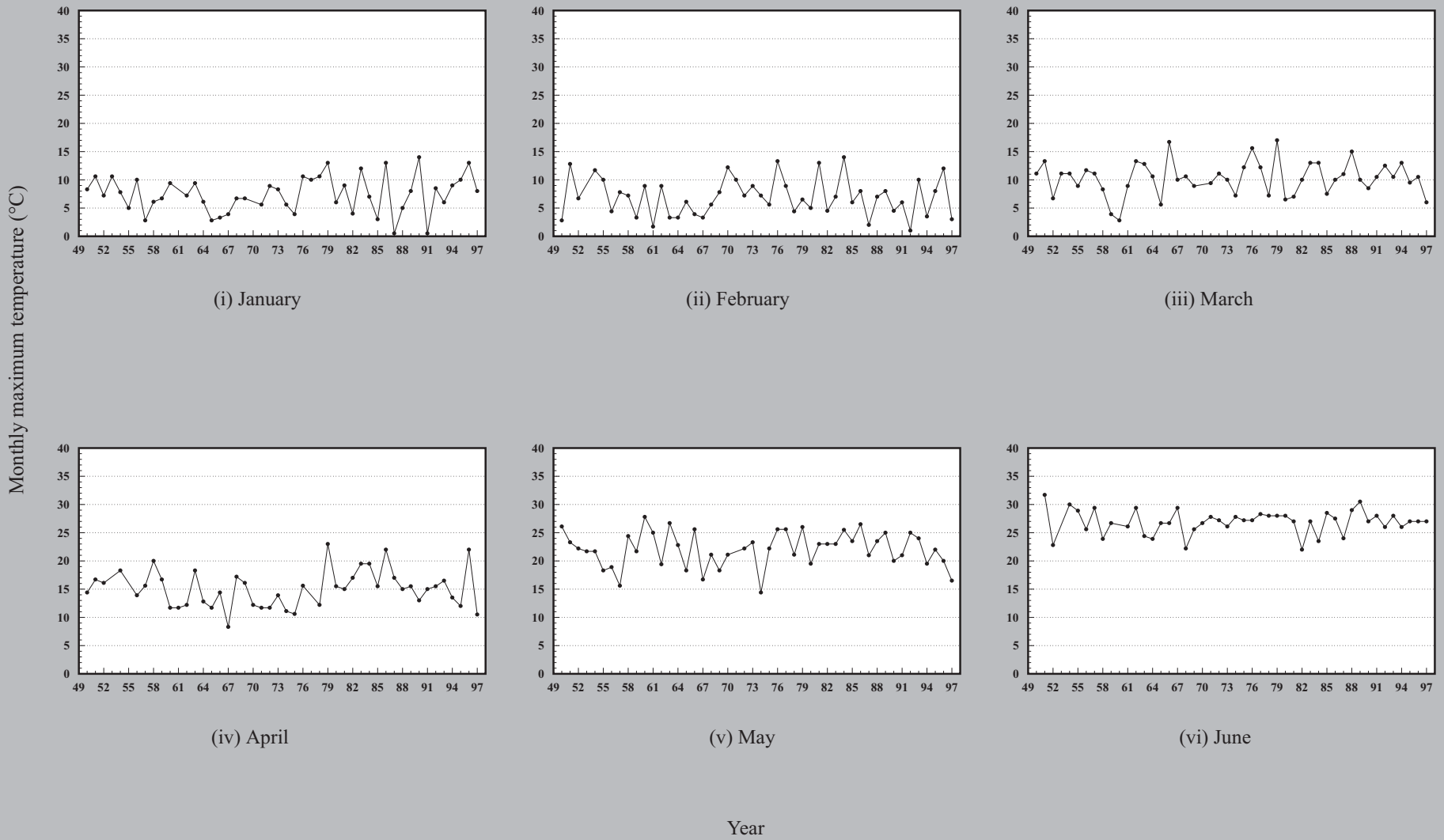


Fig. 2A-12a. Monthly maximum temperature (°C) for Deer Lake, 1950 - 1997. (missing data may not allow estimation for some years)

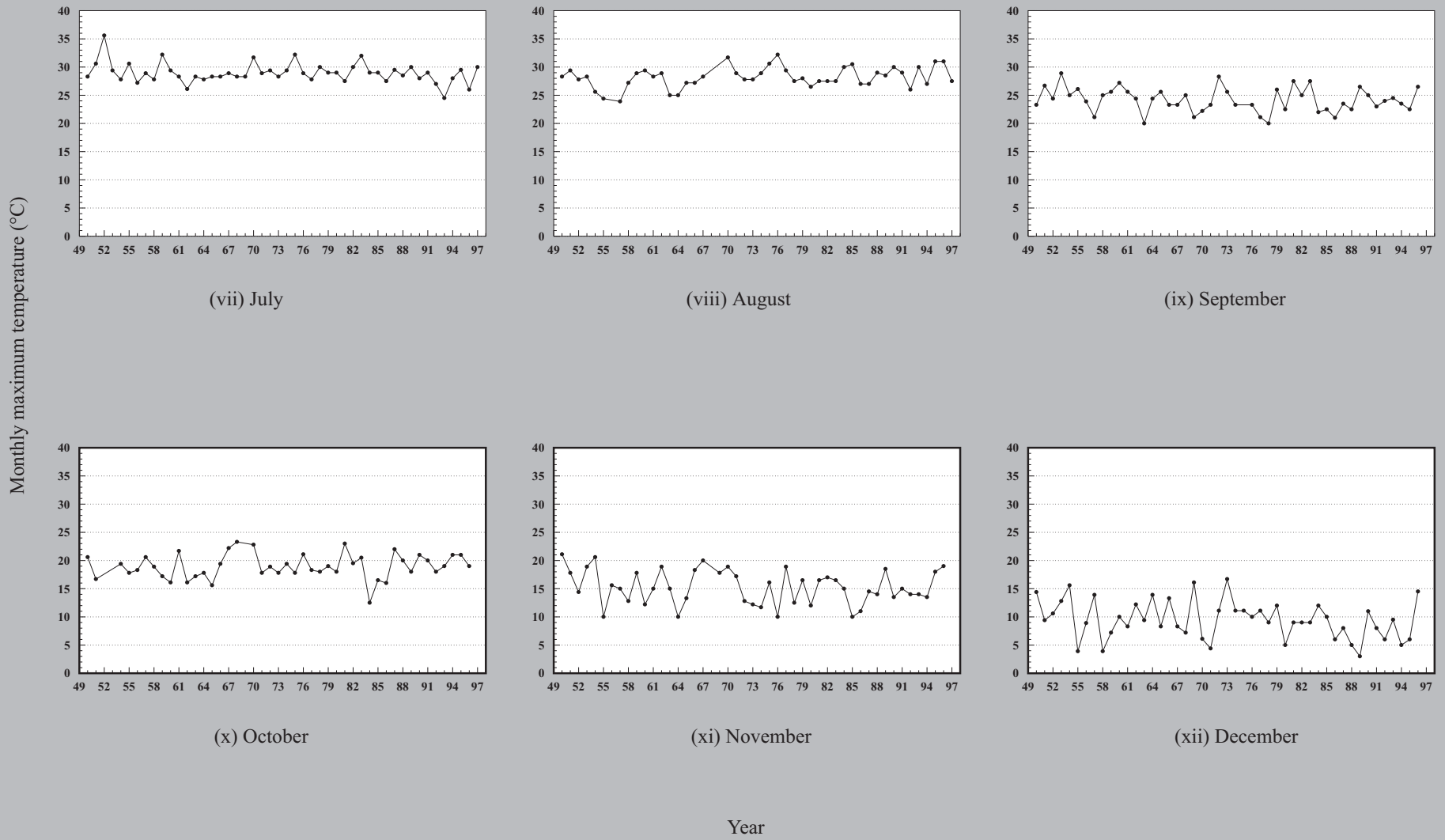


Fig. 2A-12a (con'd). Monthly maximum temperature (°C) for Deer Lake, 1950 - 1997. (missing data may not allow estimation for some years)

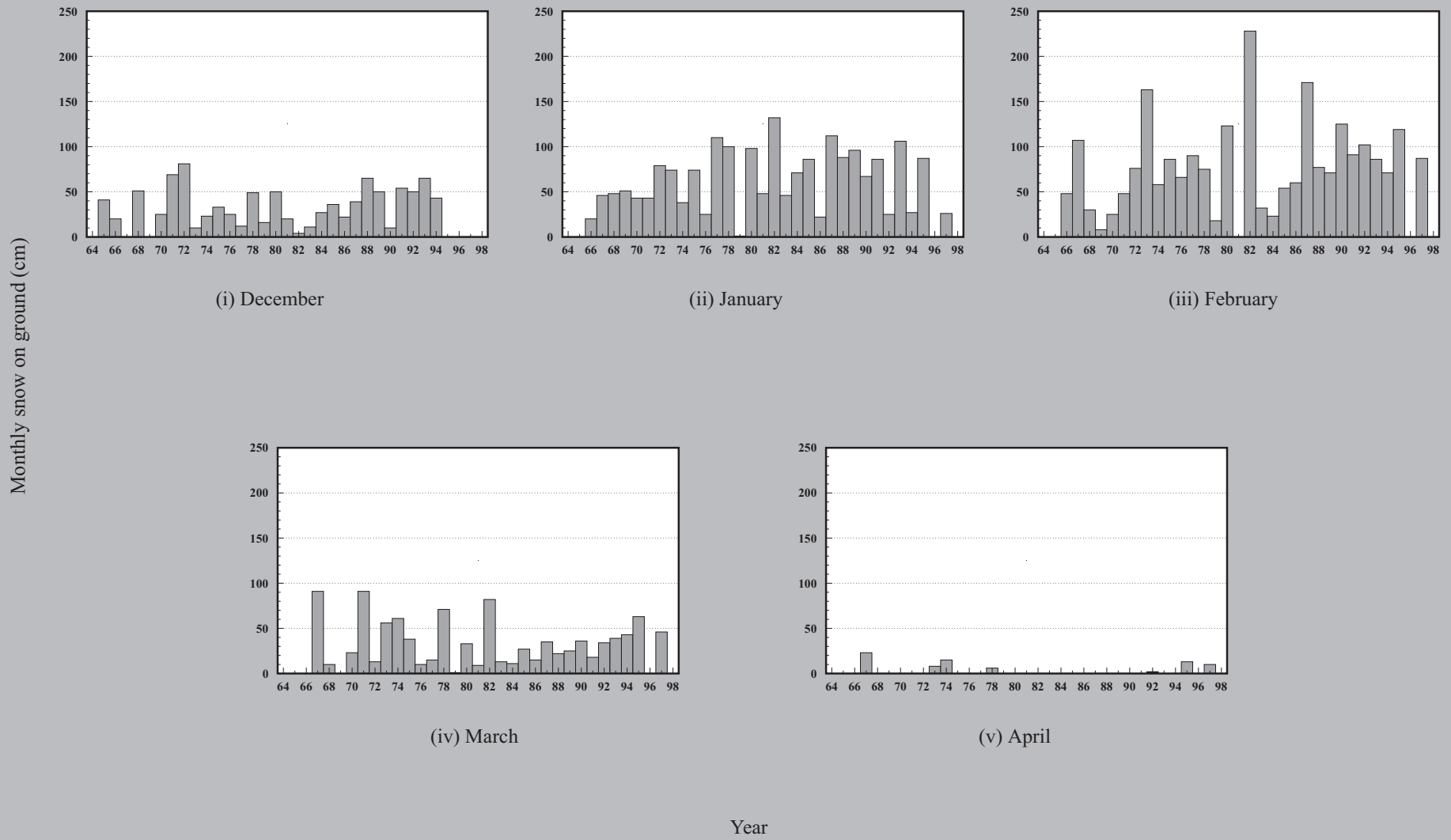
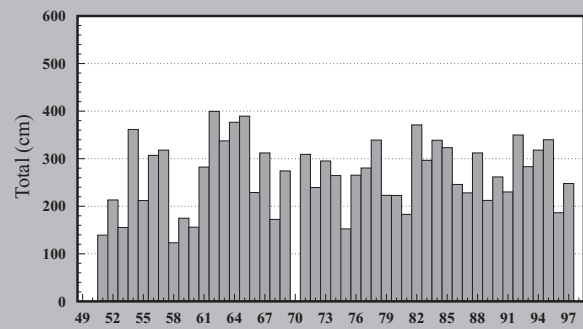
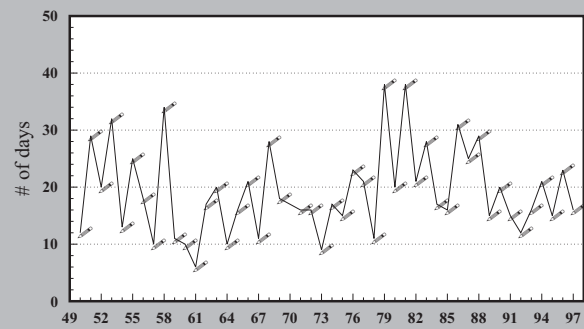


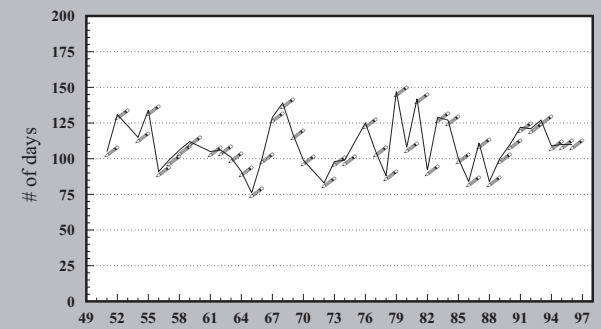
Fig. 2A-12b. Snow depth (cm) on ground on the last day of the month for Deer Lake 1964-1997. (missing data may not allow estimation for some years)



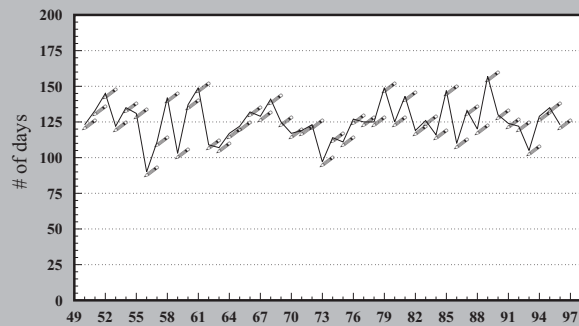
c. Snowfall



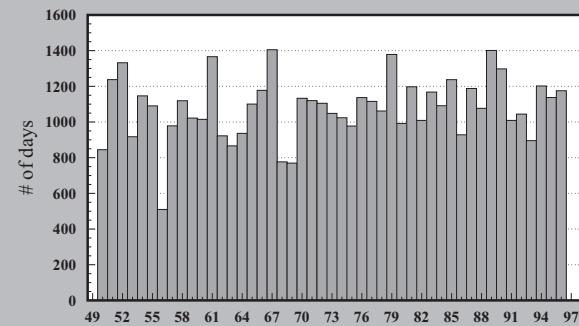
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-12c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Deer Lake, 1950 - 1997. (missing data may not allow estimation for some years)

Table 2A-12a. Monthly maximum temperature (°C) for Gander.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	8.9	5.6	8.9	12.8	20.6	28.3	30.6	28.3	22.2	18.9	17.8	11.1
1951	10.0	11.7	13.3	16.1	21.7	28.9	30.6	28.9	25.6	20.0	16.7	8.9
1952	8.3	7.8	3.3	13.3	21.1	26.1	35.6	31.1	23.9	20.0	15.6	7.2
1953	11.7	8.3	11.7	13.9	20.0	26.7	31.1	28.9	27.2	18.3	17.2	11.7
1954	7.2	12.8	7.8	20.6	22.2	31.1	28.9	24.4	23.9	17.2	16.7	12.8
1955	5.6	7.8	7.8	11.7	21.7	30.0	30.6	28.3	24.4	20.6	9.4	1.7
1956	7.8	6.7	7.8	10.6	21.1	28.3	26.1	26.7	25.0	17.2	14.4	8.9
1957	8.3	1.7	5.6	10.0	17.8	27.2	28.9	27.8	22.2	21.1	13.9	13.3
1958	10.0	6.7	6.1	18.9	23.3	22.2	28.3	28.9	23.9	19.4	12.2	3.3
1959	5.6	6.7	3.9	12.2	22.2	26.7	30.6	25.6	28.9	14.4	15.6	13.3
1960	7.8	5.0	2.2	10.6	25.6	30.6	28.3	29.4	25.6	16.7	12.8	9.4
1961	2.2	0.6	6.7	10.0	22.8	29.4	31.1	30.6	27.2	20.6	16.1	7.2
1962	6.1	9.4	10.0	11.7	20.6	30.6	27.8	27.8	24.4	16.1	17.8	10.6
1963	11.1	5.0	12.2	13.3	24.4	25.6	32.8	25.0	22.2	19.4	15.6	12.8
1964	6.7	3.3	6.7	13.9	27.8	23.9	29.4	24.4	22.8	17.2	7.8	9.4
1965	3.3	5.6	5.0	9.4	21.7	26.7	27.2	27.8	25.0	17.2	12.8	8.3
1966	2.8	3.9	12.8	12.8	24.4	28.3	27.2	26.1	25.6	16.7	15.0	14.4
1967	5.0	5.0	6.1	7.2	16.7	31.1	31.7	30.0	25.0	21.7	20.6	11.7
1968	6.1	5.0	11.1	18.3	23.3	24.4	30.0	27.2	23.3	20.6	12.2	6.7
1969	7.2	6.1	8.9	15.6	19.4	27.2	28.3	25.6	21.1	20.6	16.7	14.4
1970	2.8	9.4	5.6	11.1	21.7	25.6	30.0	30.0	22.8	20.0	15.0	7.8
1971	5.0	8.3	9.4	15.6	26.1	27.8	27.8	28.3	23.9	18.3	16.1	10.0
1972	8.3	6.1	11.1	9.4	28.3	27.8	30.6	25.6	24.4	22.8	12.2	13.3
1973	7.2	8.3	9.4	15.6	22.2	28.3	29.4	24.4	23.9	18.3	11.1	12.2
1974	3.9	5.6	6.7	11.7	14.4	27.8	26.1	26.7	25.0	17.8	10.0	12.2
1975	2.8	4.4	12.2	10.0	21.1	25.0	33.3	28.9	21.7	16.1	13.3	11.1
1976	11.1	11.1	13.3	15.6	25.0	30.0	28.9	33.3	23.9	22.2	16.7	10.0
1977	6.2	7.0	8.8	14.8	21.5	27.6	27.6	29.4	23.3	20.8	15.8	11.6
1978	8.7	3.4	8.2	11.9	24.3	27.3	29.1	29.2	22.9	19.2	11.0	6.4

Table 2A-12a (con'd). Monthly maximum temperature (°C) for Gander.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1979	11.4	6.3	14.5	17.7	26.7	28.3	30.8	30.3	23.8	18.4	15.8	9.5
1980	3.0	5.4	6.3	16.7	20.7	27.1	27.8	26.6	22.2	17.2	11.9	7.8
1981	8.3	12.2	6.4	12.7	23.1	23.8	30.2	29.2	24.8	18.3	14.5	10.0
1982	3.4	7.0	9.0	18.0	19.6	22.1	29.7	27.5	27.2	18.3	16.5	8.6
1983	12.3	4.8	9.7	19.8	19.6	26.8	30.9	26.4	26.2	19.6	13.2	7.9
1984	5.6	8.9	12.1	13.6	22.5	24.8	28.6	28.6	25.3	14.0	18.0	11.3
1985	3.0	5.7	5.2	11.0	21.5	27.5	29.7	28.4	24.6	16.9	11.0	9.4
1986	11.2	5.0	10.5	22.6	25.1	25.9	26.9	26.9	21.7	17.7	9.8	6.1
1987	5.2	3.0	8.5	17.6	22.3	25.3	30.8	28.7	23.6	21.1	15.7	9.3
1988	6.4	7.7	13.0	11.7	26.5	30.3	29.0	31.7	23.1	20.3	14.4	5.7
1989	5.9	7.9	7.0	12.2	24.7	26.8	30.2	30.2	26.8	20.0	18.2	3.3
1990	11.3	4.2	8.8	14.1	24.0	28.2	29.6	28.6	23.0	21.0	14.2	11.1
1991	3.3	9.7	7.5	13.2	21.3	26.4	30.0	28.1	23.2	17.8	16.6	7.6
1992	7.0	4.1	10.3	13.2	25.9	23.1	26.7	26.4	25.2	17.5	13.4	9.0
1993	7.9	9.2	10.2	15.4	21.3	28.6	25.1	26.7	24.4	17.7	13.3	12.0
1994	6.6	3.2	9.1	11.9	17.9	26.6	27.3	27.9	20.5	21.3	15.4	3.8
1995	7.4	7.8	8.0	11.9	21.2	25.1	30.3	30.7	22.9	18.7	15.0	4.4
1996	11.3	13.4	10.9	20.0	18.8	25.8	26.1	31.7	26.7	16.6	14.4	12.0
1997	7.5	4.9	5.1	5.5	19.3	24.6	27.9	27.4	23.2	19.3	-	-
Normal	-3.0	-3.1	0.2	4.8	11.5	17.2	21.6	20.4	15.6	9.7	4.6	-0.5

Table 2A-12b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Gander.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	23	-	15	-	41	30	-
1951	49	125.3	15	5	3	0	-
1952	31	203.3	-	20	64	58	-
1953	42	166.3	18	5	5	8	-
1954	20	290.1	15	61	28	30	-
1955	34	277.7	74	28	3	20	-
1956	43	411.1	15	18	79	86	-
1957	24	372.8	-	13	74	36	-
1958	43	176.6	33	3	41	3	-
1959	12	363.8	18	58	51	51	-
1960	26	412.3	8	28	20	76	3
1961	16	417.3	15	51	89	25	5
1962	31	514.1	46	18	86	25	15
1963	30	446.5	25	3	33	13	10
1964	27	407.4	10	33	25	30	3
1965	42	550.2	38	46	53	56	13
1966	35	493.9	13	61	69	18	23
1967	27	385.1	-	23	33	41	30
1968	32	242.0	8	10	28	8	3
1969	31	295.7	0	36	5	3	-
1970	33	285.3	20	23	38	13	-
1971	40	298.3	30	20	8	10	3
1972	25	309.5	71	8	23	15	3
1973	26	383.4	5	20	48	28	5
1974	34	340.6	30	25	25	64	3
1975	30	372.2	5	51	58	33	-
1976	41	367.8	8	3	10	-	-
1977	29	246.8	7	11	50	6	-
1978	22	420.0	22	19	27	16	1
1979	43	368.4	7	-	48	6	-
1980	26	311.0	2	41	83	35	-
1981	35	295.8	40	27	-	24	-
1982	24	438.9	3	78	133	42	-
1983	45	438.7	27	15	92	11	-
1984	35	393.4	2	28	28	58	7
1985	23	330.6	23	35	39	21	2
1986	33	298.4	18	-	24	18	-
1987	35	367.4	57	78	69	19	-

Table 2A-12b (con'd). Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Gander.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1988	29	528.2	50	24	7	24	-
1989	21	431.2	36	46	32	25	-
1990	28	385.6	0	8	46	11	26
1991	30	362.1	12	55	75	4	1
1992	35	384.4	32	6	42	2	3
1993	32	389.4	83	21	36	25	3
1994	32	491.7	59	21	60	46	-
1995	41	561.6	27	122	103	64	6
1996	38	286.8	-	3	1	1	-
1997	28	370.6	-	16	54	17	24
Normal	31	21	28	44	23	5	-

Table 2A-12c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Gander.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	123	1164.9	140
1951	127	1170.1	111
1952	138	1353.4	138
1953	123	1200.5	132
1954	112	1089.2	113
1955	131	1056.3	112
1956	124	914.9	97
1957	113	1026.8	114
1958	130	1092.6	130
1959	115	919.9	94
1960	144	1335.0	142
1961	143	1393.8	143
1962	114	888.6	112
1963	120	873.2	95
1964	117	915.3	119
1965	126	1049.6	104
1966	110	1115.4	129
1967	111	1259.6	113
1968	124	787.0	108
1969	124	1063.4	121
1970	107	1034.0	107
1971	140	1239.6	138
1972	124	1011.4	112

Table 2A-12c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for Gander.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1973	124	1012.6	112
1974	122	843.7	104
1975	104	1160.2	115
1976	119	1102.8	117
1977	146	1055.8	117
1978	136	1017.2	108
1979	157	1354.3	152
1980	143	932.3	130
1981	145	1057.1	121
1982	121	948.9	110
1983	115	1123.0	132
1984	110	997.5	103
1985	132	1176.8	147
1986	117	978.9	124
1987	137	1116.2	131
1988	125	1050.4	118
1989	107	1114.9	105
1990	137	1251.2	136
1991	133	928.9	130
1992	137	947.8	130
1993	121	804.4	103
1994	144	1150.7	124
1995	148	1056.2	130
1996	137	1130.5	131
1997	133	1074.1	124
Normal	-	1238.0	-

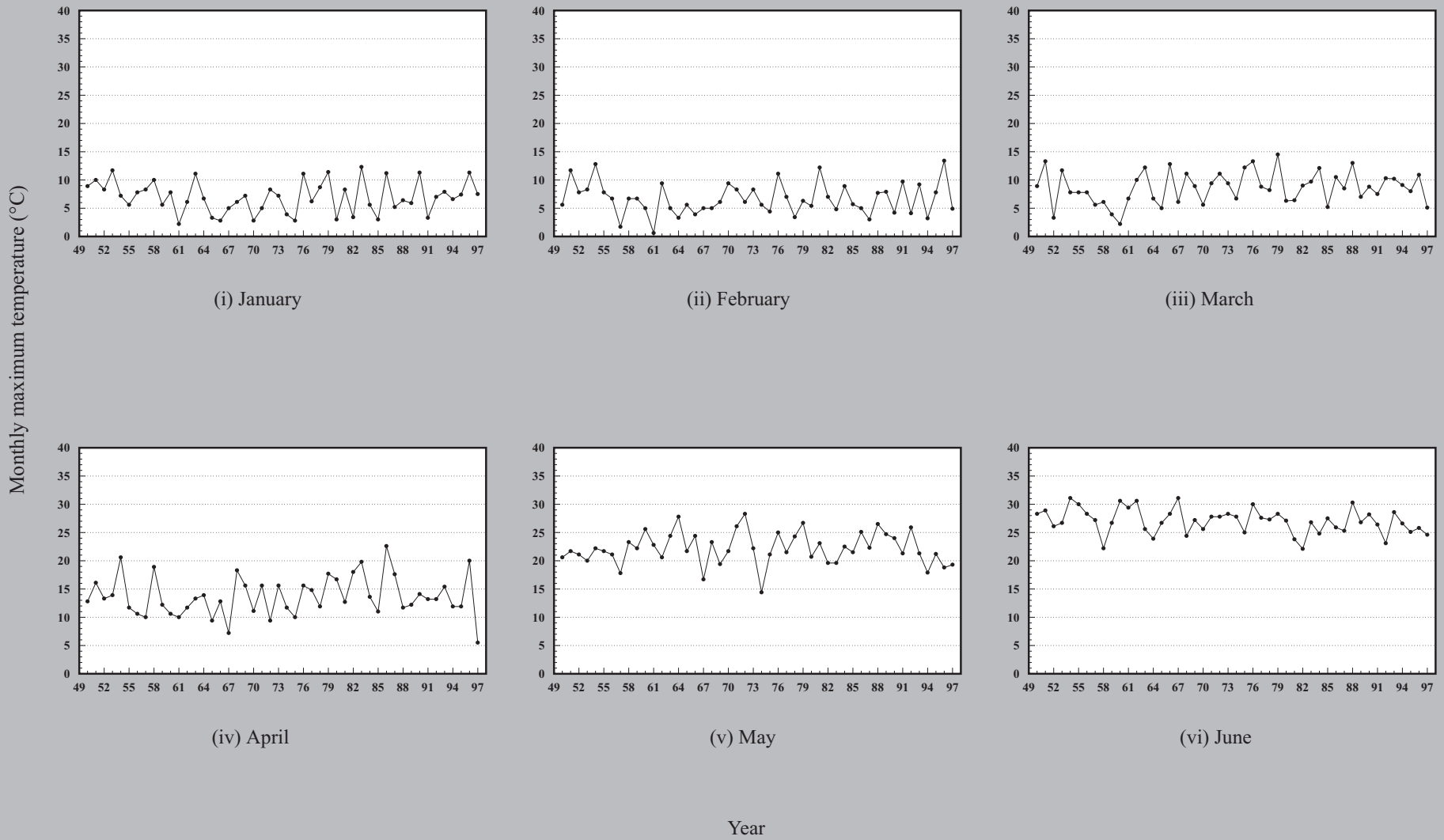


Fig. 2A-13a. Monthly maximum temperature (°C) for Gander, 1950 - 1997. (missing data may not allow estimation for some years)

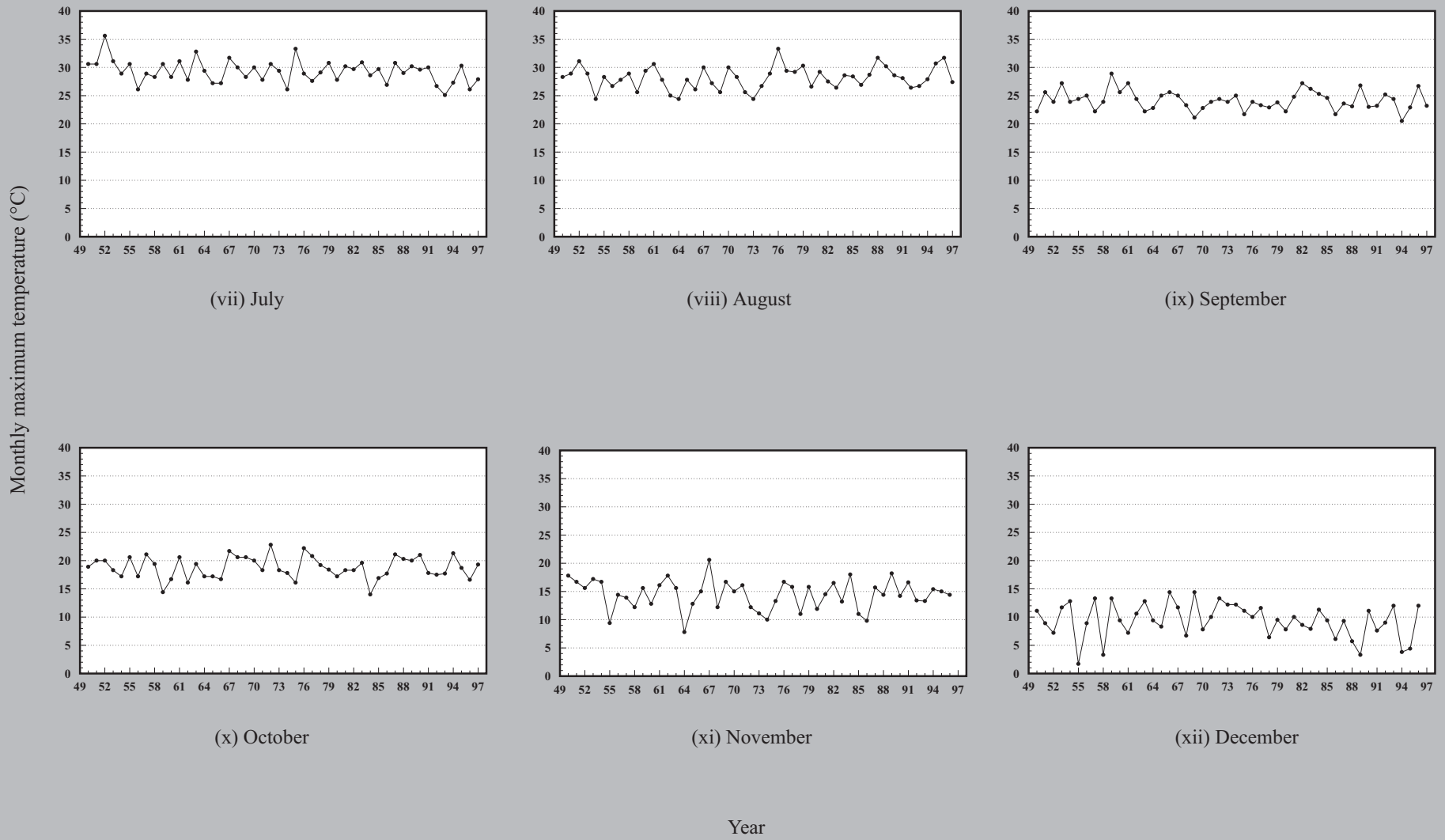


Fig. 2A-13a (con'd). Monthly maximum temperature (°C) for Gander, 1950 - 1997. (missing data may not allow estimation for some years)

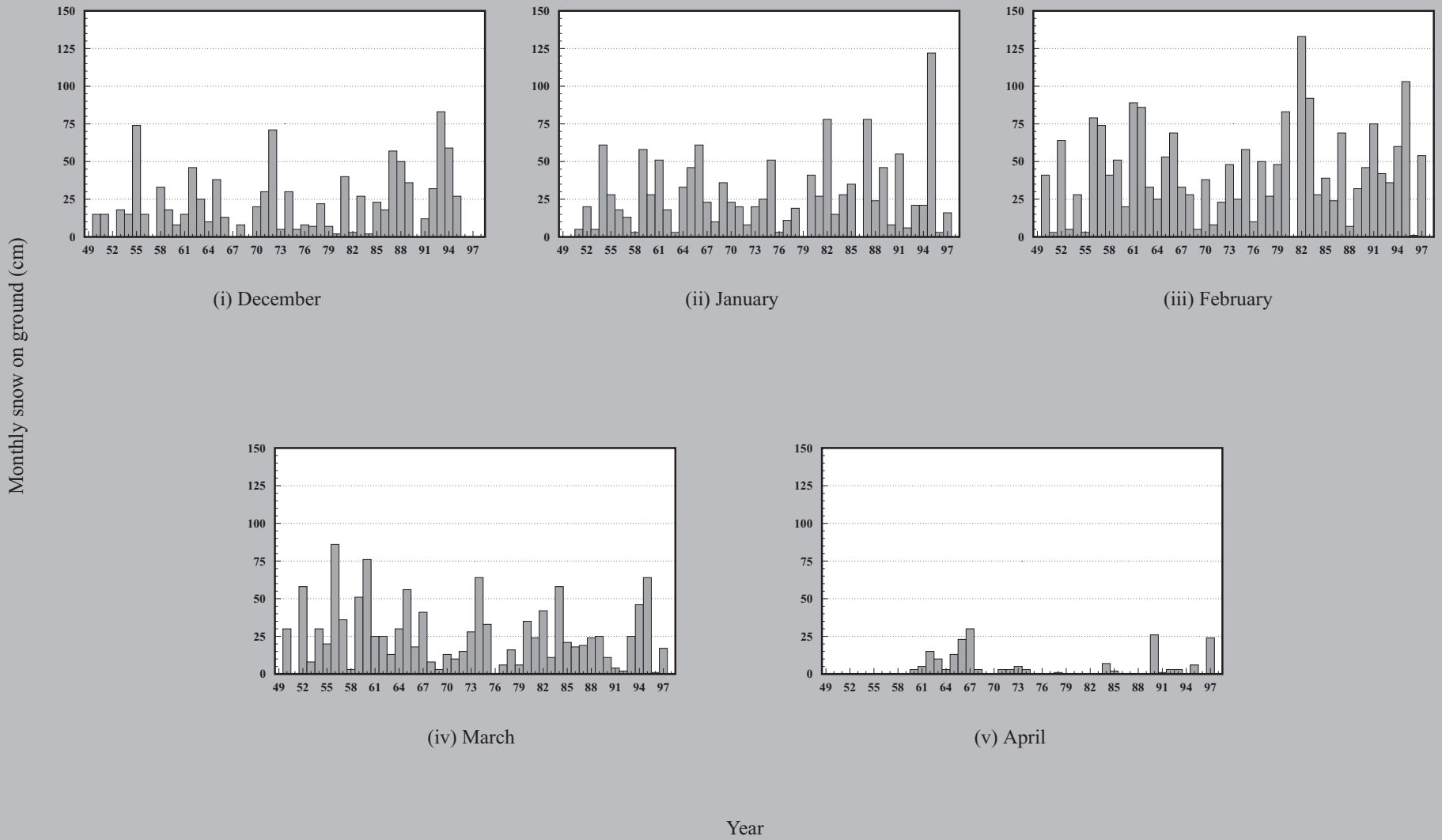
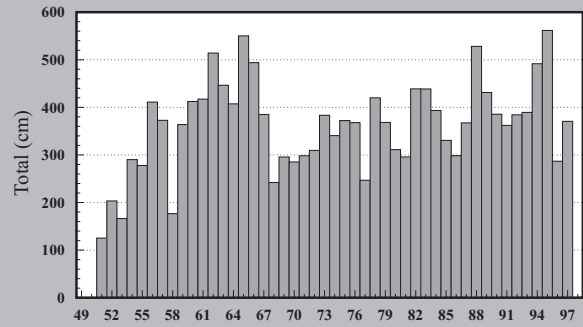
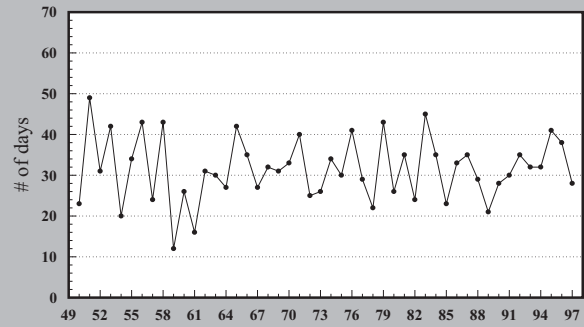


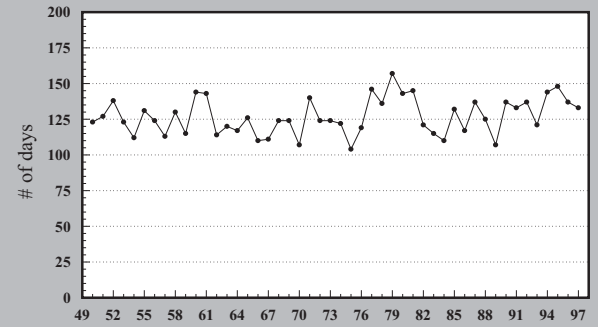
Fig. 2A-13b. Snow depth (cm) on ground on the last day of the month for Gander 1950-1997. (missing data may not allow estimation for some years)



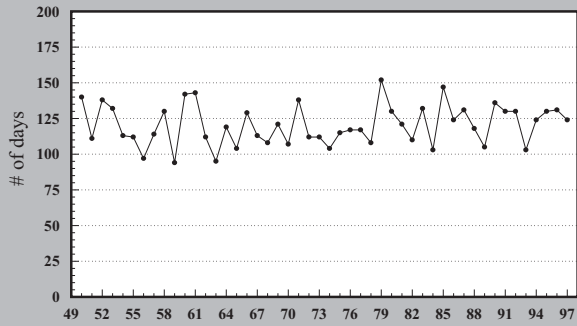
c. Snowfall



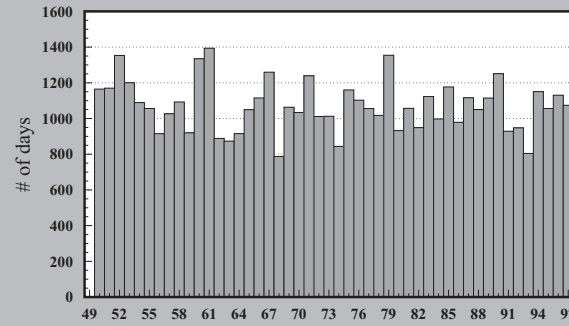
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-13c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Gander, 1950 - 1997. (missing data may not allow estimation for some years)

Table 2A-13a. Monthly maximum temperature (°C) for Grand Falls.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1956	-	-	-	-	-	-	27.8	26.1	25.0	18.9	16.1	10.0
1957	8.9	3.3	8.9	11.1	18.9	26.7	28.3	27.2	23.9	22.2	14.4	13.9
1958	10.0	6.1	6.1	17.8	23.3	24.4	28.9	29.4	24.4	20.0	13.3	4.4
1959	7.8	7.8	5.6	13.3	26.7	26.7	31.7	31.7	29.4	15.6	16.1	13.3
1960	10.0	7.2	5.6	13.3	27.2	31.7	28.9	30.6	26.1	16.1	12.8	8.9
1961	1.7	2.2	6.7	11.7	23.9	29.4	31.7	30.6	28.3	21.7	15.6	6.7
1962	7.2	8.9	11.7	11.1	22.2	30.6	27.8	28.3	25.6	17.8	18.3	11.1
1963	10.6	4.4	12.8	15.0	26.1	28.3	33.3	26.7	23.3	22.2	16.1	11.1
1964	8.3	4.4	8.3	14.4	28.9	24.4	29.4	26.1	23.9	17.8	8.3	9.4
1965	5.0	6.1	6.7	11.1	22.2	28.9	28.9	30.0	27.2	17.8	13.3	8.9
1966	3.3	6.1	15.0	14.4	24.4	27.2	28.3	28.9	26.7	17.2	17.8	12.8
1967	5.0	-	7.8	9.4	18.3	33.3	32.2	31.1	26.7	22.8	20.6	12.8
1968	8.3	9.4	-	18.3	23.9	26.1	31.7	29.4	26.1	22.2	12.2	8.3
1969	7.8	8.9	10.6	15.6	20.6	30.0	30.0	27.2	25.6	20.6	19.4	16.7
1970	3.3	11.7	7.2	12.8	25.0	26.7	31.7	31.7	23.3	21.7	15.6	6.7
1971	5.6	9.4	11.1	15.6	27.8	29.4	29.4	29.4	25.6	19.4	16.7	5.6
1972	6.7	6.1	12.2	11.1	28.9	28.3	33.3	26.1	29.4	22.2	14.4	12.2
1973	8.9	8.9	10.0	17.2	23.3	29.4	31.1	28.3	26.7	16.7	12.2	13.9
1974	5.6	6.7	8.3	11.7	17.8	30.0	29.4	28.9	25.6	18.9	11.1	11.7
1975	3.9	6.1	13.9	12.8	22.2	26.7	34.4	30.6	23.3	18.3	15.0	11.1
1976	10.6	11.7	13.9	15.0	25.6	31.1	31.1	33.9	25.6	24.4	17.8	10.6
1977	7.8	7.2	12.2	20.0	23.9	29.4	30.6	31.1	23.3	20.6	18.3	11.1
1978	9.4	4.4	8.3	12.8	26.1	28.9	31.7	30.6	23.9	21.1	12.8	8.9
1979	11.7	7.8	15.6	20.0	29.4	30.6	33.3	32.2	25.0	19.0	17.0	10.5
1980	4.0	5.5	6.5	18.5	22.0	29.0	29.5	28.0	23.0	18.0	13.0	7.5
1981	9.0	13.0	9.0	13.0	24.0	27.0	32.0	30.5	26.0	19.5	16.0	12.0
1982	3.5	8.5	10.5	18.5	22.0	24.0	33.5	30.0	28.5	18.5	17.0	10.5
1983	12.5	7.5	11.0	21.0	22.0	28.0	33.5	30.0	27.5	22.0	14.5	8.0
1984	6.0	9.0	12.5	15.5	23.0	24.0	30.0	30.0	27.0	14.5	18.5	12.5
1985	4.0	7.5	6.5	15.0	24.0	29.5	32.5	30.5	27.5	18.5	11.5	10.0

Table 2A-13a (con'd). Monthly maximum temperature (°C) for Grand Falls.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1986	12.0	7.0	12.0	23.0	27.5	27.5	29.0	27.5	23.5	18.0	11.0	8.0
1987	3.0	3.5	10.0	18.5	23.0	27.5	32.5	28.5	25.0	24.0	15.5	8.0
1988	7.5	8.0	14.5	15.5	27.5	33.0	30.5	32.5	25.5	22.0	15.5	5.5
1989	7.0	8.5	12.0	14.0	24.5	30.5	31.5	30.0	27.0	19.0	18.0	3.0
1990	12.5	5.5	10.0	16.0	25.5	30.5	30.0	31.0	25.0	22.0	14.5	11.0
1991	3.5	9.5	8.5	14.5	21.5	28.0	34.0	31.0	24.0	19.0	16.0	8.5
1992	8.0	4.0	11.0	14.5	27.0	24.5	30.0	29.0	25.5	19.0	14.0	9.0
1993	4.5	7.5	13.0	14.5	24.5	30.0	27.0	29.0	26.5	18.5	14.0	12.5
1994	8.0	5.0	9.0	14.5	18.0	29.5	29.0	30.5	21.0	24.0	14.0	4.5
1995	10.0	8.0	9.5	14.0	23.0	28.0	32.0	33.5	24.0	21.0	16.0	4.5
1996	12.0	13.0	12.0	20.0	20.0	27.5	28.0	-	28.5	-	-	-
1997	9.0	5.0	5.0	9.5	19.5	25.5	29.0	28.5	22.5	-	-	-
Normal	-2.3	-2.6	1.3	6.3	13.0	18.8	23.3	22.0	16.9	10.8	5.5	0.1

Table 2A-13b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Grand Falls.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1957	15	220.7	0	15	36	0	0
1958	31	105.9	13	0	25	3	0
1959	12	161.2	5	10	5	15	-
1960	19	259.4	-	20	5	30	0
1961	9	332.9	-	38	76	30	0
1962	26	293.2	76	25	89	20	10
1963	23	334.1	10	0	-	-	-
1964	24	318.2	-	23	13	-	0
1965	22	436.4	30	43	-	41	0
1966	14	286.0	10	30	38	-	-
1967	17	172.5	3	-	-	-	-
1968	23	118.8	-	-	-	-	0
1969	22	217.2	-	-	-	-	-
1970	27	168.4	-	-	-	-	-
1971	24	202.2	-	-	-	0	0
1972	21	134.2	-	-	-	-	-
1973	15	250.5	-	-	-	-	-
1974	22	254.5	-	-	-	-	-
1975	17	278.6	-	-	-	-	-
1976	29	338.5	0	-	0	0	0
1977	21	205.6	0	-	-	0	0
1978	23	363.1	0	0	0	0	0
1979	33	246.2	0	0	0	0	0
1980	15	253.5	0	0	0	0	0
1981	28	205.8	-	16	0	6	0
1982	17	326.8	0	-	-	-	0
1983	33	290.2	15	19	44	4	0
1984	25	386.1	-	38	-	38	0
1985	13	216.8	23	20	-	2	0
1986	27	253.4	9	0	41	15	0
1987	33	198.3	59	42	62	8	0
1988	25	396.6	30	42	40	0	0
1989	15	264.4	30	-	45	16	0
1990	17	243.2	0	6	50	6	11
1991	14	276.0	22	50	55	5	0
1992	18	227.4	13	10	50	2	4
1993	22	299.0	40	29	39	22	0
1994	20	285.3	41	22	64	49	0
1995	17	243.6	10	70	69	51	-
1996	27	126.2	-	1	0	0	0
1997	13	234.4	-	8	15	0	17
Normal	-	-	19	38	-	35	-

Table 2A-13c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Grand Falls.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1957	128	1260.2	143
1958	149	1113.6	130
1959	100	1055.9	103
1960	143	1403.7	152
1961	150	1479.1	148
1962	105	1004.7	118
1963	126	1020.1	117
1964	152	1097.9	145
1965	106	1100.8	115
1966	156	1205.8	133
1967	140	1481.3	129
1968	137	1010.9	128
1969	125	1217.1	122
1970	127	1288.9	140
1971	140	1412.9	145
1972	125	1171.0	124
1973	98	1271.4	136
1974	122	1106.0	121
1975	117	1293.7	115
1976	112	1241.0	126
1977	142	1274.4	144
1978	120	1205.1	143
1979	156	1551.8	158
1980	154	1107.1	133
1981	121	1430.0	170
1982	161	1161.9	135
1983	163	1350.8	143
1984	153	1196.7	120
1985	123	1372.1	147
1986	117	1097.9	124
1987	116	1251.9	131
1988	150	1128.8	119
1989	131	1450.4	137
1990	96	1358.0	136
1991	150	1052.8	132
1992	144	1116.9	130
1993	136	887.4	105
1994	109	1265.0	129
1995	120	1018.9	133
1996	127	-	145
Normal	-	1402.0	-

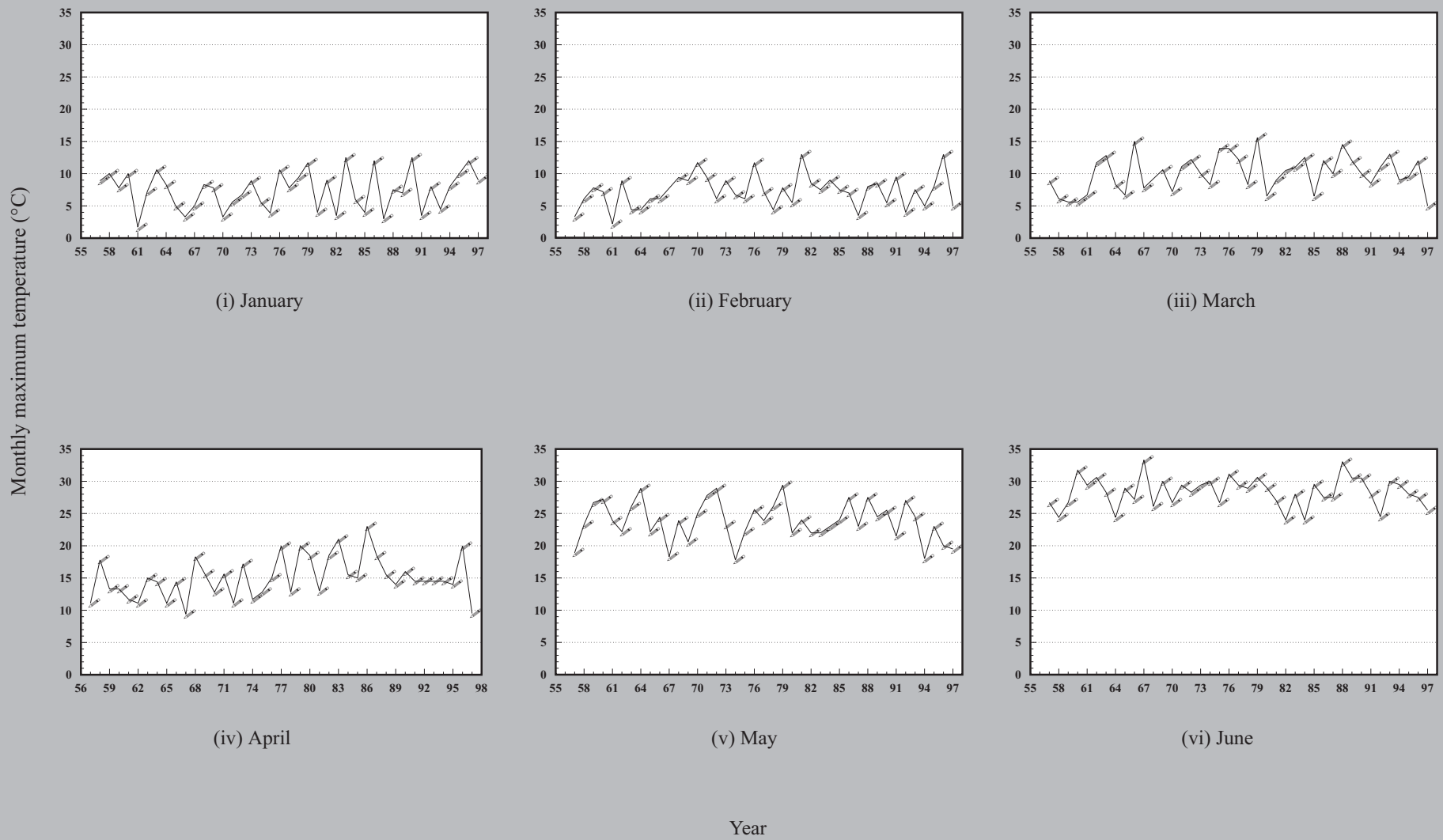


Fig. 2A-14a. Monthly maximum temperature (°C) for Grand Falls, 1955 - 1997. (missing data may not allow estimation for some years)

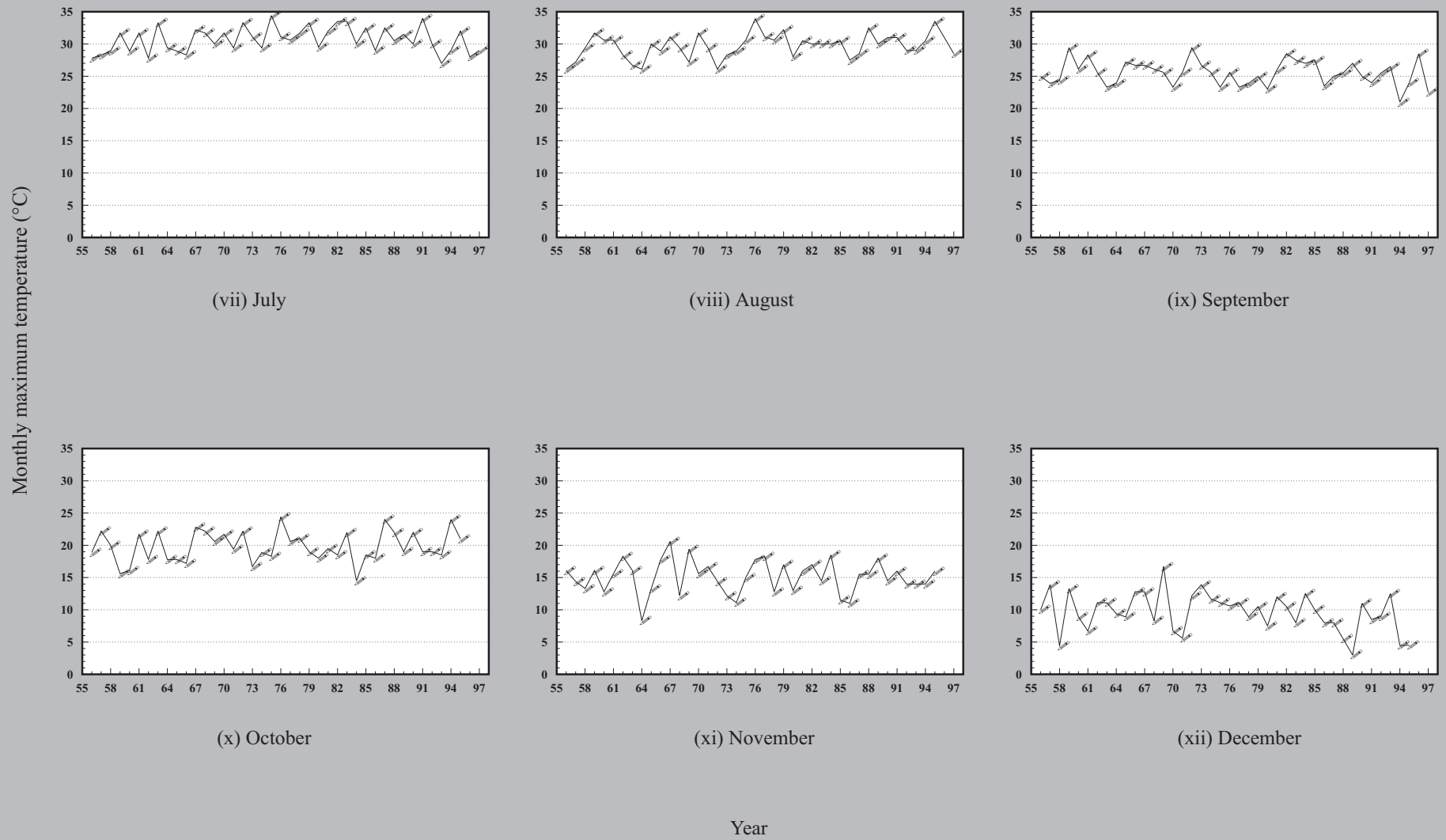


Fig. 11A-14a (con'd). Monthly maximum temperature (°C) for Grand Falls, 1955 - 1997. (missing data may not allow estimation for some years)

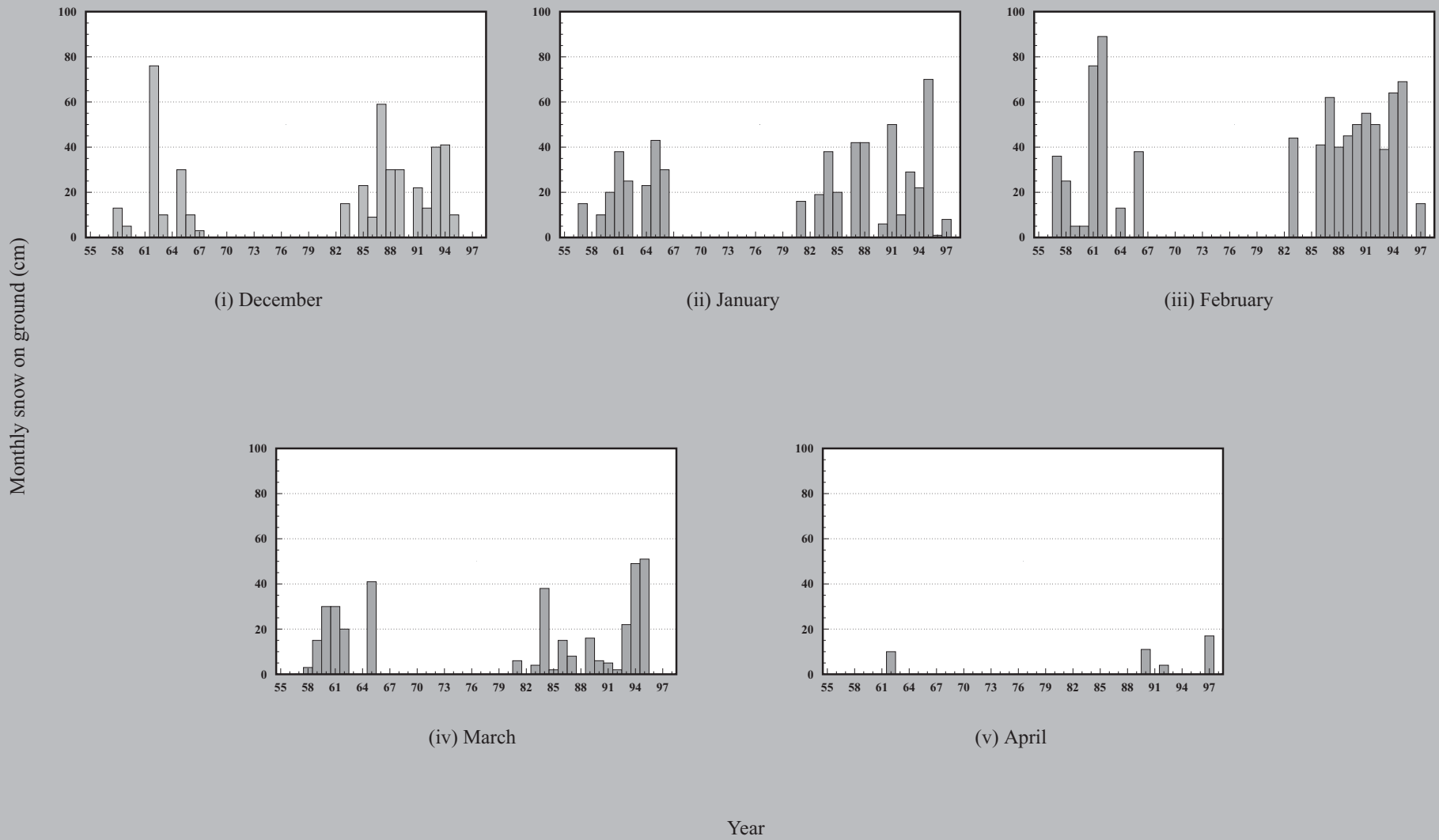
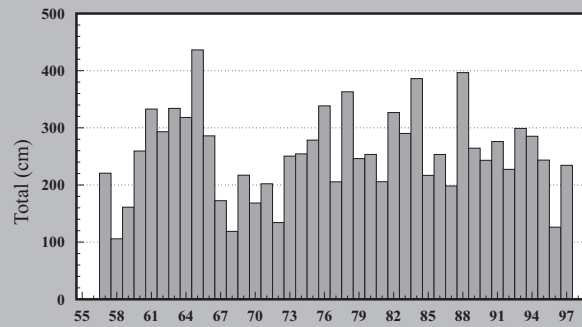
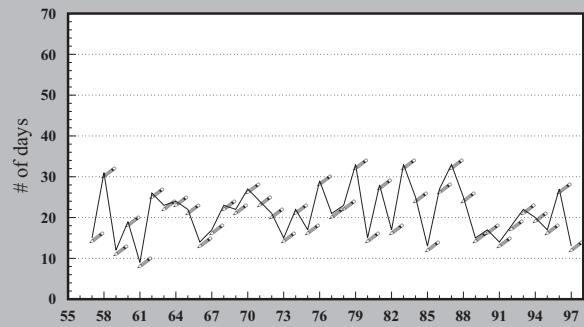


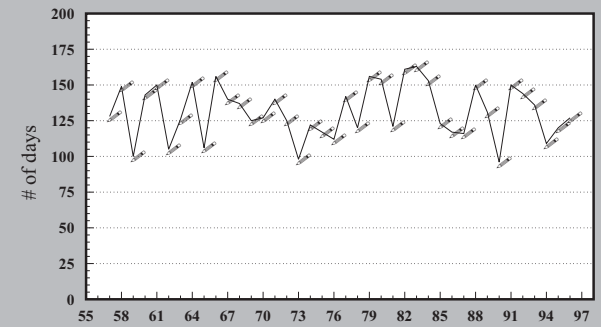
Fig. 2A-14b. Snow depth (cm) on ground on the last day of the month for Grand Falls 1956-1997. (missing data may not allow estimation for some years)



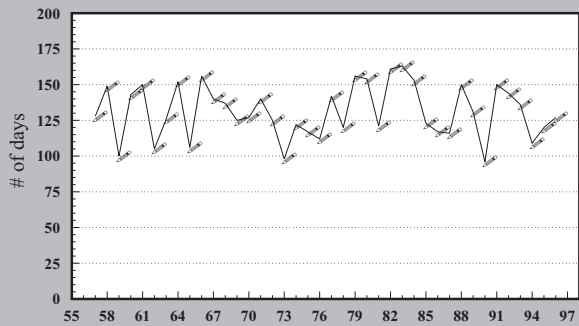
c. Snowfall



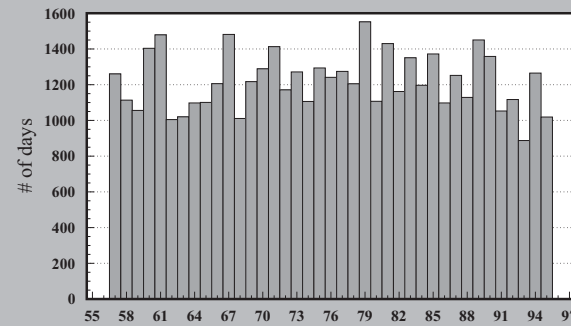
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-14c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Grand Falls, 1955 - 1997. (missing data may not allow estimation for some years)

Table 2A-14a. Monthly maximum temperature (°C) for Harbour Breton.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1984	8.5	10.0	8.0	-	17.0	21.0	21.5	24.5	20.0	15.5	12.5	12.0
1985	4.0	5.0	6.0	9.5	19.0	19.5	22.5	22.0	18.5	15.5	12.5	9.0
1986	9.0	6.5	5.0	17.0	16.0	18.0	22.0	24.0	17.5	14.0	10.0	7.0
1987	5.0	6.0	9.0	12.0	16.5	18.0	22.0	21.5	20.0	19.0	13.0	11.0
1988	8.5	7.0	11.0	11.0	18.0	18.0	20.0	24.0	19.0	16.0	13.0	7.0
1989	6.0	5.0	6.0	9.0	18.0	23.0	22.0	-	23.5	16.0	14.5	6.0
1990	7.0	6.5	6.0	11.5	15.0	17.0	24.0	26.0	20.0	17.5	13.0	10.0
1991	5.0	10.0	9.5	14.0	14.0	19.5	20.0	21.0	20.0	17.0	14.0	9.0
1992	8.0	4.0	7.0	10.0	20.5	22.0	19.5	21.0	18.5	15.5	12.0	9.5
1993	9.0	7.5	8.0	10.5	15.0	19.0	23.0	27.5	18.0	15.0	12.0	12.0
1994	7.5	1.5	8.0	9.0	14.0	18.5	21.0	21.5	21.0	15.5	15.0	6.5
1995	7.5	4.0	8.5	11.5	17.0	25.0	24.0	23.0	18.0	16.5	14.0	7.5
1996	9.5	9.5	10.0	13.5	15.5	16.0	19.5	24.0	23.0	14.0	12.0	11.5
1997	8.5	5.5	5.5	10.5	16.0	20.0	19.0	21.0	19.0	-	-	-

Table 2A-14b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Harbour Breton.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1984	50	146.8	0	13	1	9	0
1985	18	219.7	-	25	48	20	1
1986	40	149.5	0	-	2	11	0
1987	28	93.4	2	16	28	-	0
1988	25	90.0	7	4	0	0	0
1989	15	173.0	17	8	12	20	0
1990	24	130.0	0	20	13	7	0
1991	23	99.0	15	22	24	0	0
1992	22	159.5	13	0	47	12	0
1993	28	91.0	8	3	5	0	0
1994	26	133.0	18	10	56	13	0
1995	12	209.0	0	19	12	0	0
1996	20	114.0	0	3	5	-	0
1997	17	233.0	-	6	26	8	10

Table 2A-14c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Harbour Breton.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1984	154	1098.0	153
1985	159	1107.7	148
1986	166	960.0	154
1987	157	1166.8	157
1988	168	1054.3	146
1989	175	1099.8	151
1990	174	1128.6	149
1991	161	971.9	156
1992	164	997.0	138
1993	151	1042.4	145
1994	148	1111.5	136
1995	178	1107.0	163
1996	174	1019.9	143
1997	-	1059.4	140

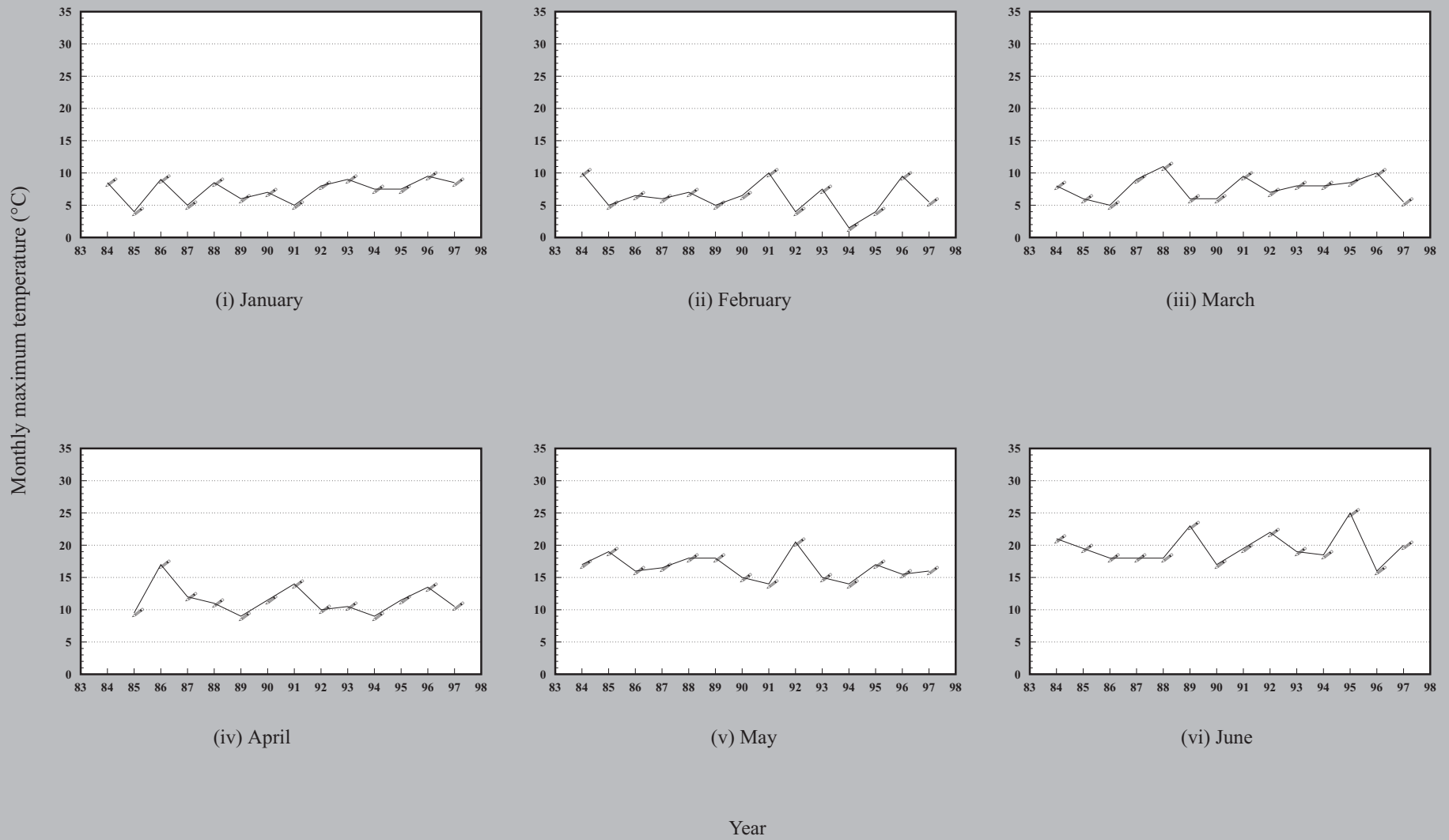


Fig. 2A-15a. Monthly maximum temperature ($^{\circ}\text{C}$) for Harbour Breton, 1984 - 1997. (missing data may not allow estimation for some years)

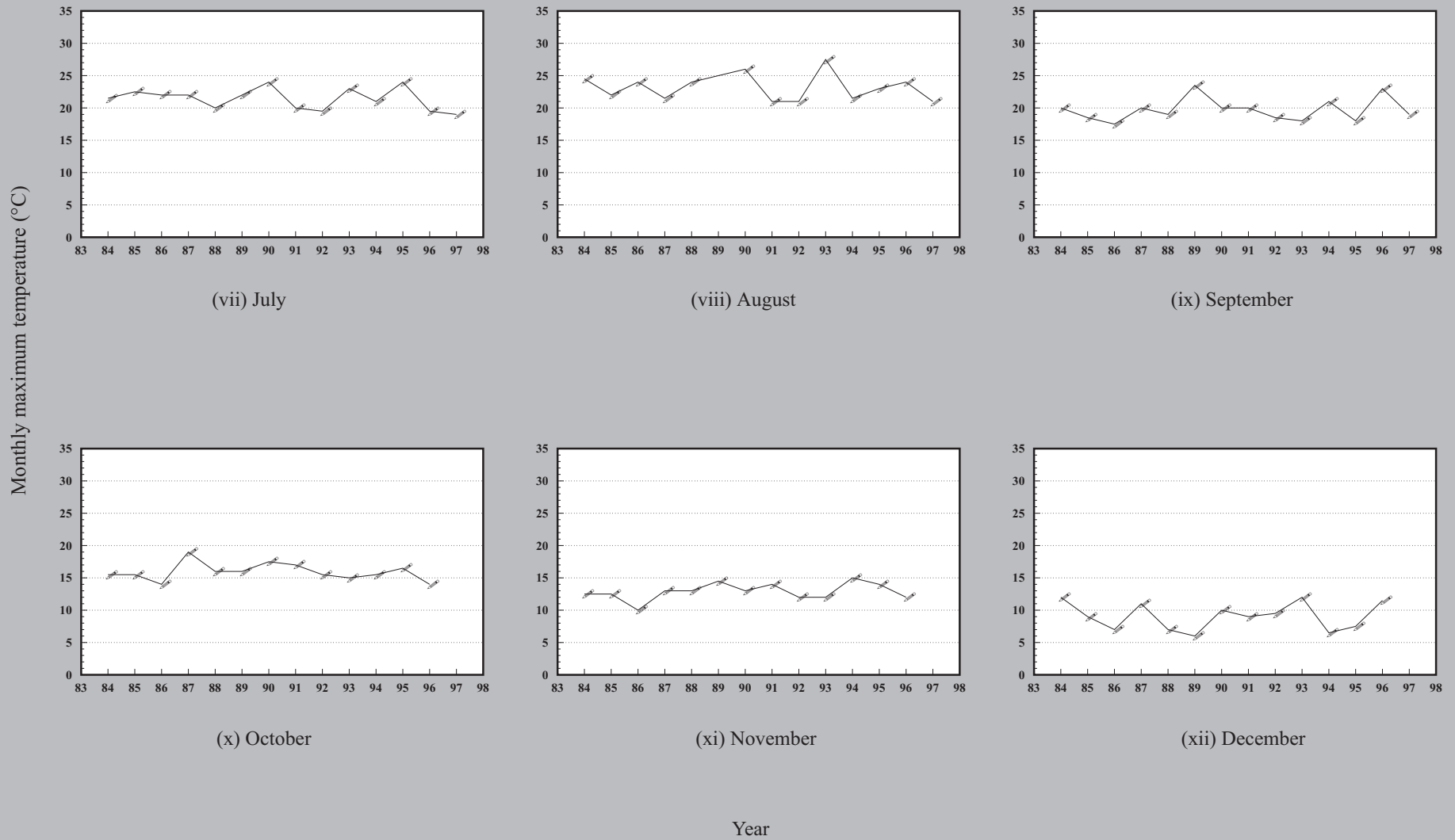


Fig. 2A-15a (continued). Monthly maximum temperature (°C) for Harbour Breton, 1984 - 1997. (missing data may not allow estimation for some years)

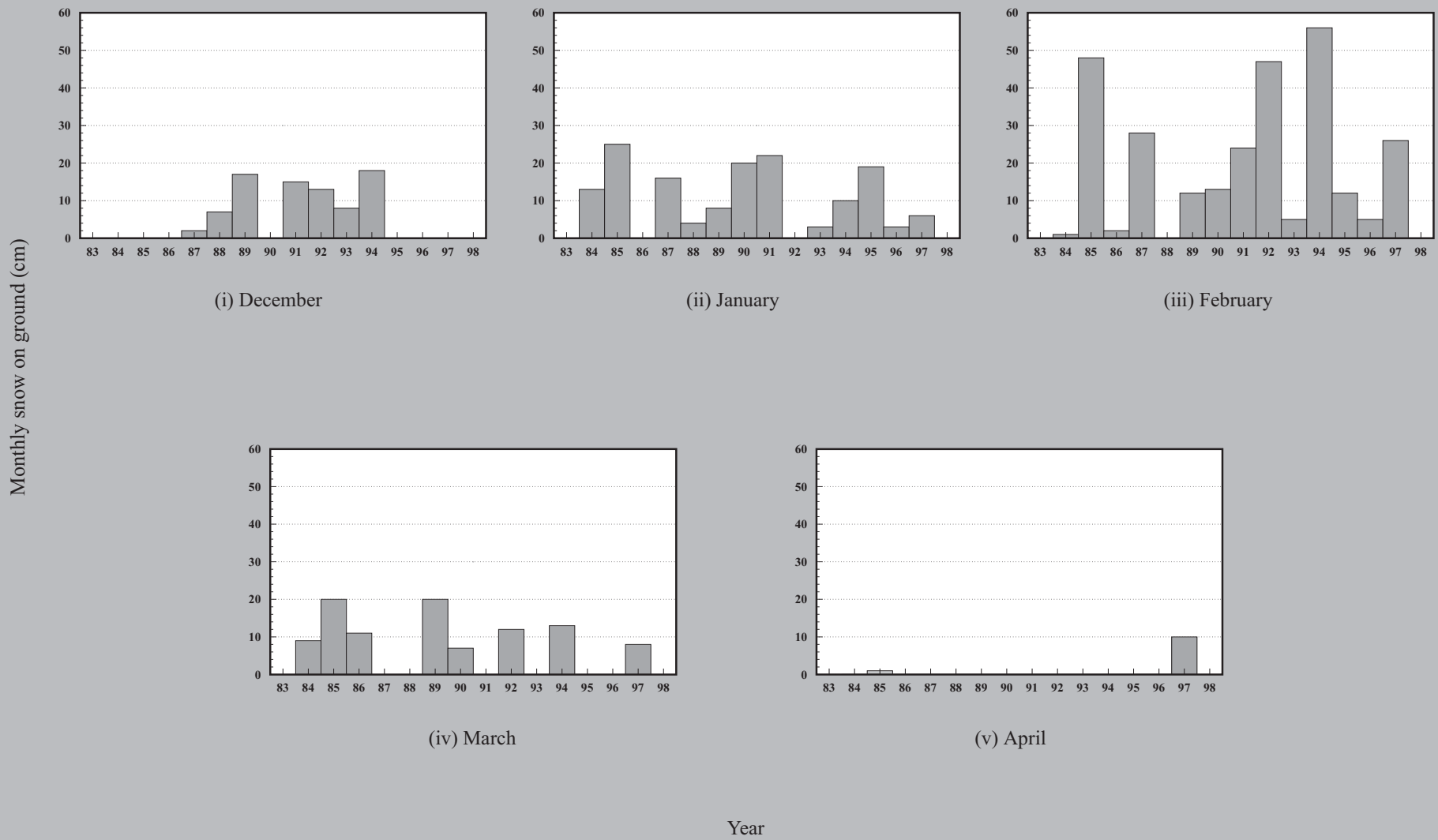
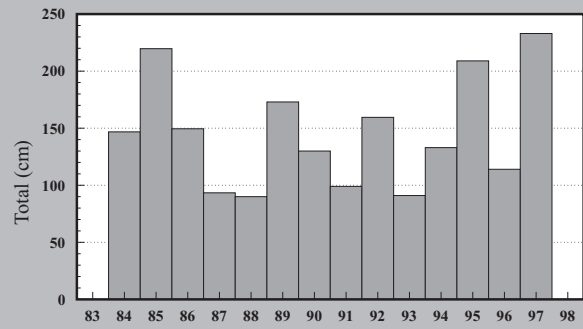
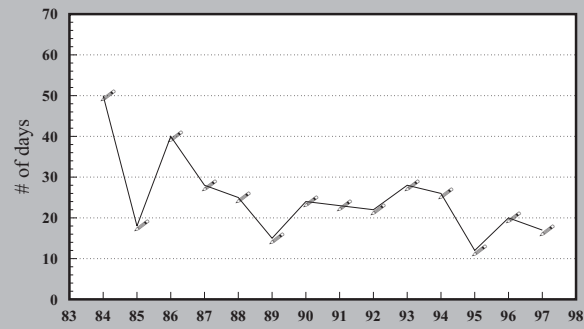


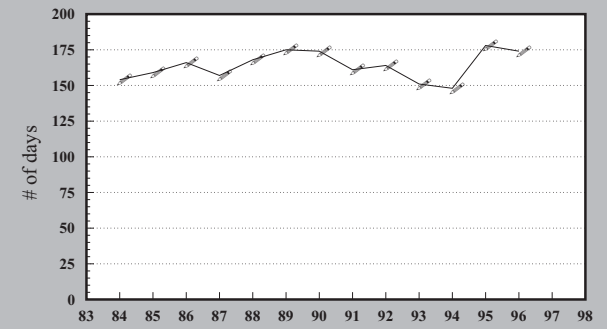
Fig. 2A-15b. Snow depth (cm) on ground on the last day of the month for Harbour Breton, 1984-1997. (missing data may not allow estimation for some years)



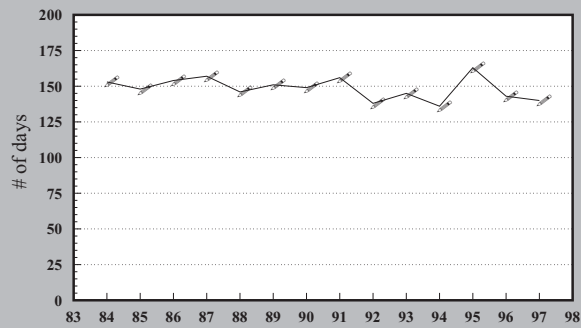
c. Snowfall



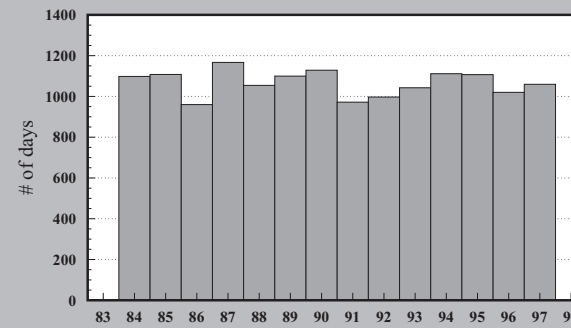
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-15c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Harbour Breton, 1984 - 1997. (missing data may not allow estimation for some years)

Table 2A-15a. Monthly maximum temperature (°C) for Harbour Deep.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1990	-	-	-	-	-	-	-	-	-	-	-	6.0
1991	-1.0	6.5	7.0	12.0	20.0	22.5	29.0	31.5	21.0	17.0	15.0	6.0
1992	7.5	1.0	12.0	14.0	26.5	23.5	29.0	27.0	24.5	16.0	12.5	4.0
1993	4.0	7.5	9.5	14.0	16.0	27.5	27.5	31.0	24.0	18.5	14.5	8.0
1994	8.5	-1.5	5.0	9.5	18.0	25.0	29.5	28.0	23.5	20.0	11.0	4.0
1995	2.0	6.5	7.0	9.0	15.5	24.0	30.0	32.0	25.0	19.5	16.0	5.5
1996	11.5	10.0	7.5	12.0	16.5	26.0	27.5	32.0	27.5	19.0	15.5	13.0
1997	8.5	2.0	7.0	9.0	17.0	26.5	26.5	27.0	23.0	-	-	-

Table 2A-15b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Harbour Deep.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1990	8	-	25	-	-	-	-
1991	7	248.0	36	65	72	58	45
1992	6	232.0	26	26	73	60	39
1993	11	207.0	76	65	121	126	60
1994	8	261.0	48	62	104	104	28
1995	15	248.0	0	126	167	167	95
1996	7	143.0	4	7	13	25	-
1997	-	261.0	-	29	49	113	89

Table 2A-15c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Harbour Deep.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1991	125	651.3	107
1992	78	716.2	114
1993	111	606.8	91
1994	109	960.5	123
1995	127	902.3	117
1996	80	850.3	96

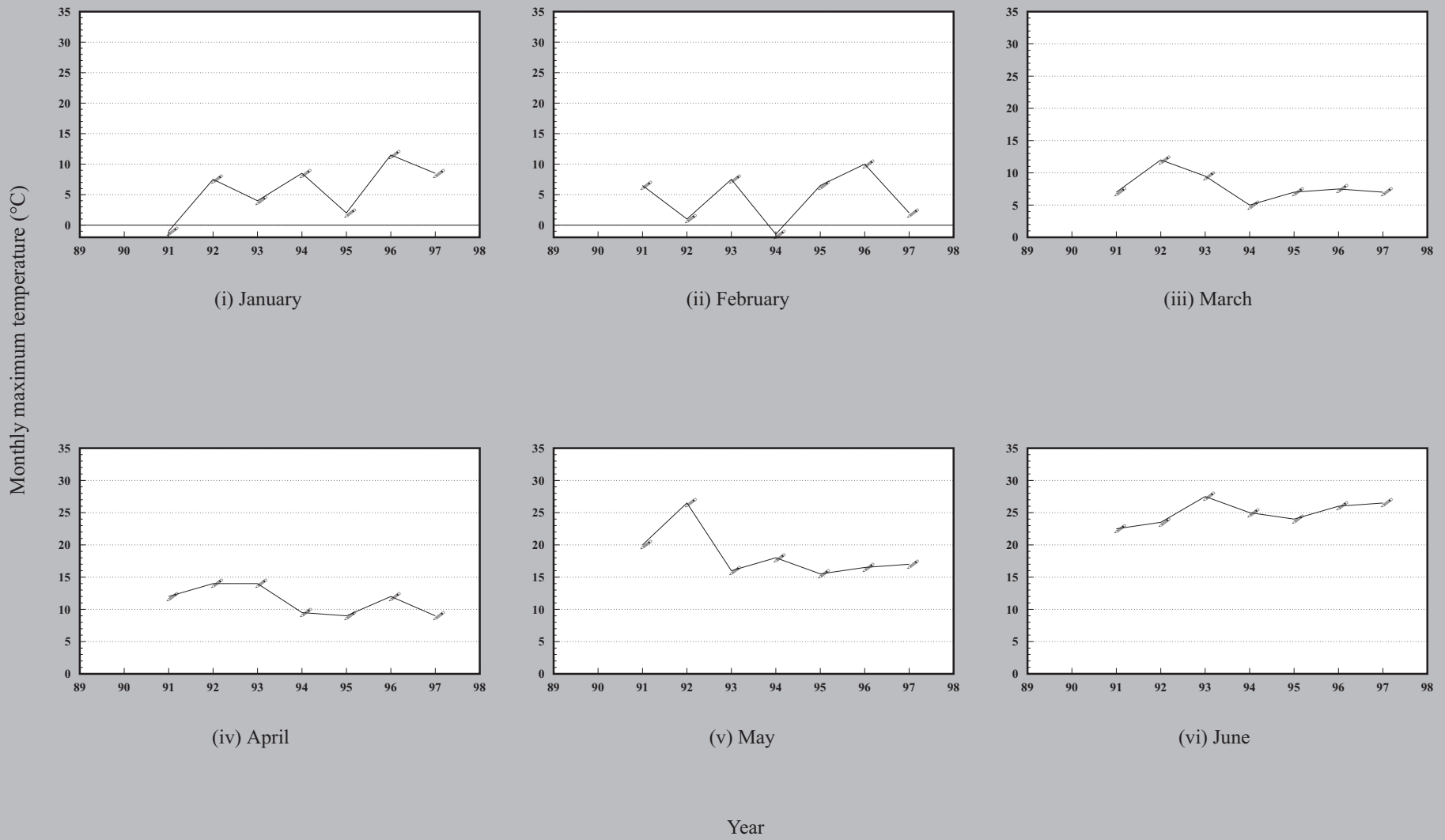


Fig. 2A-16a. Monthly maximum temperature (°C) for Harbour Deep, 1990 - 1997. (missing data may not allow estimation for some years)

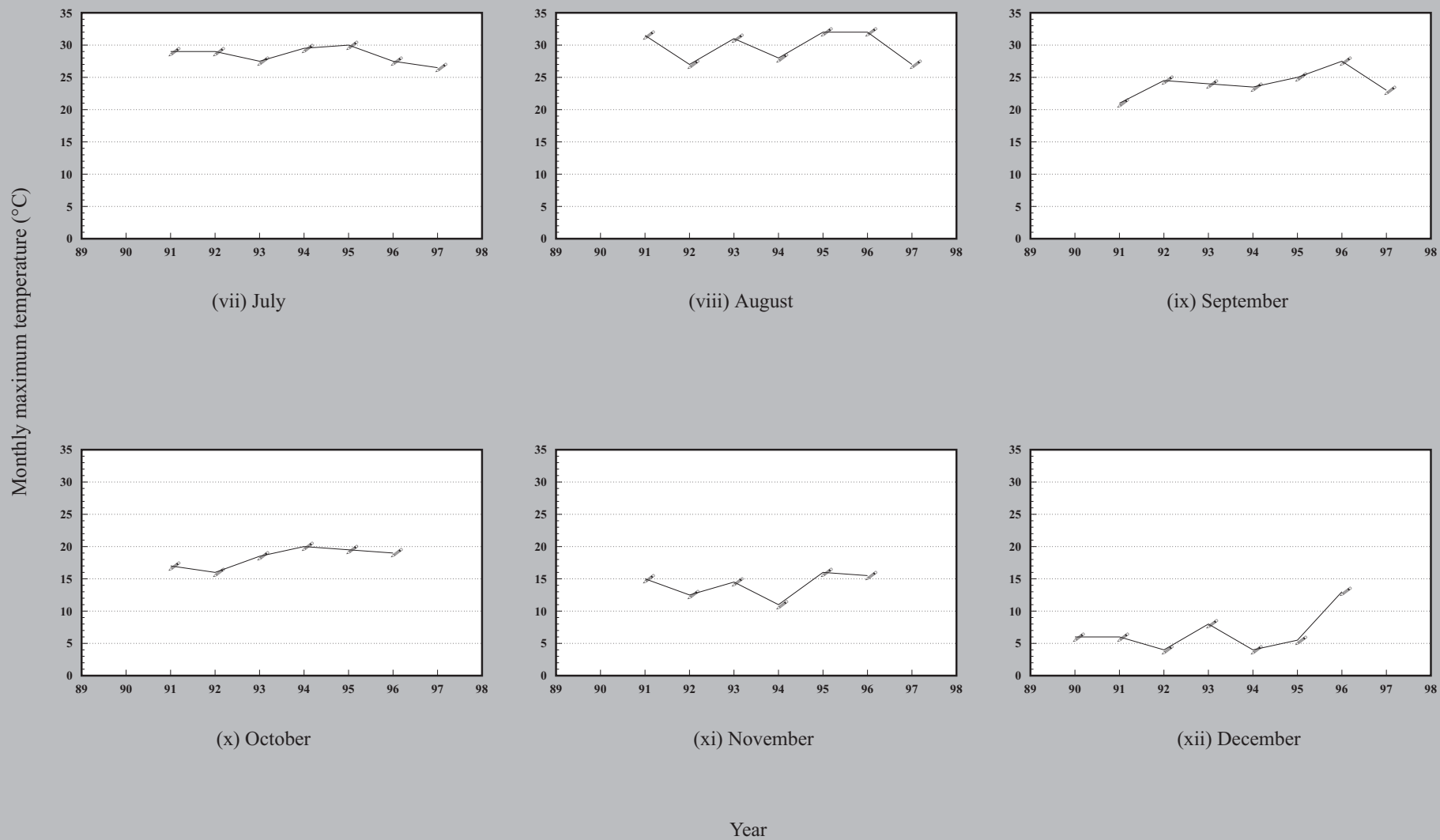


Fig. 2A-16a (con'd). Monthly maximum temperature (°C) for Harbour Deep, 1990 - 1997. (missing data may not allow estimation for some years)

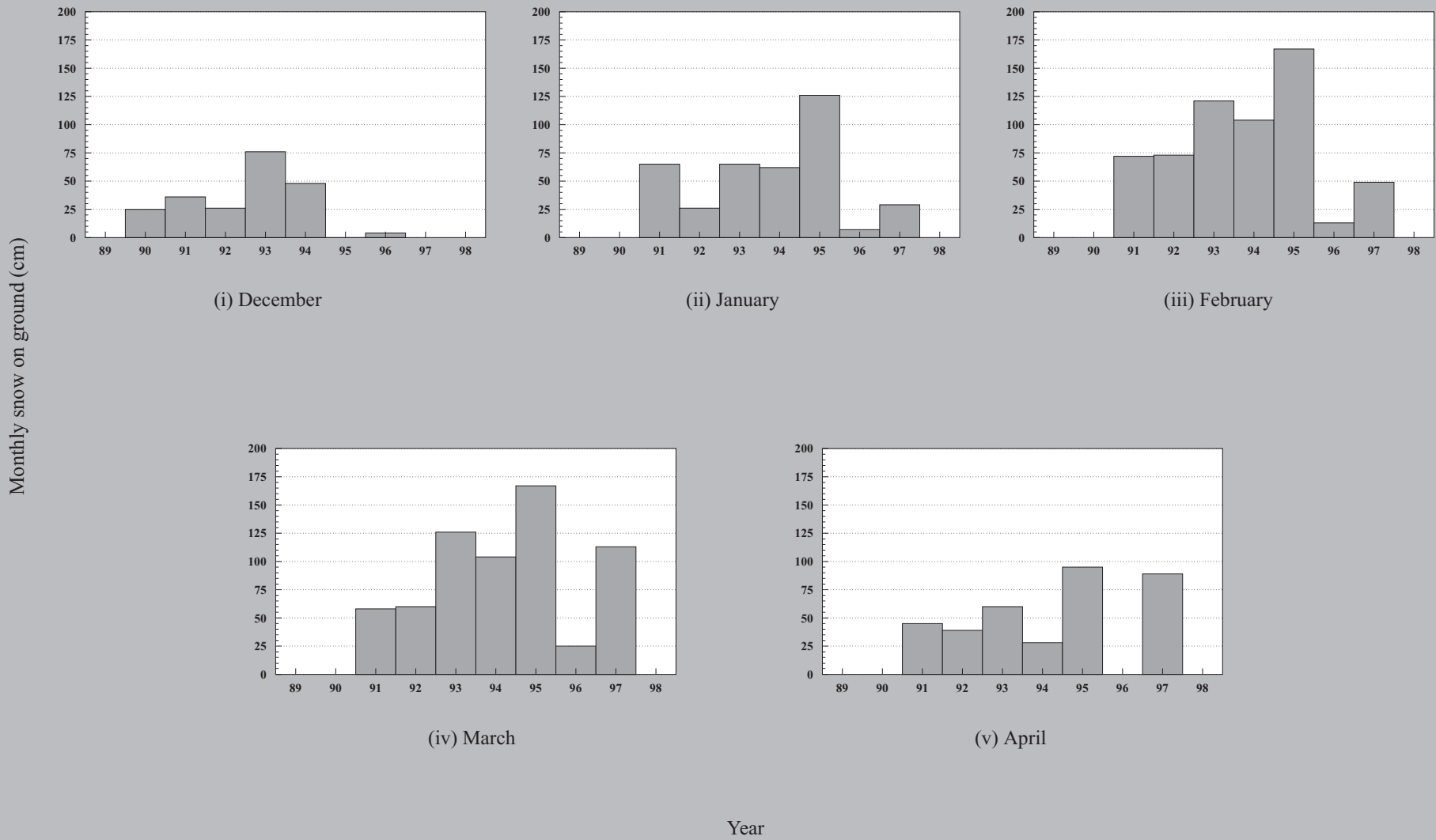
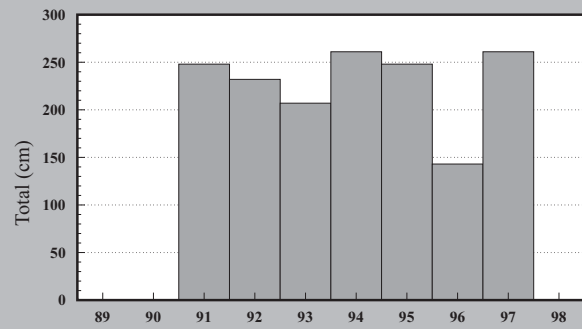
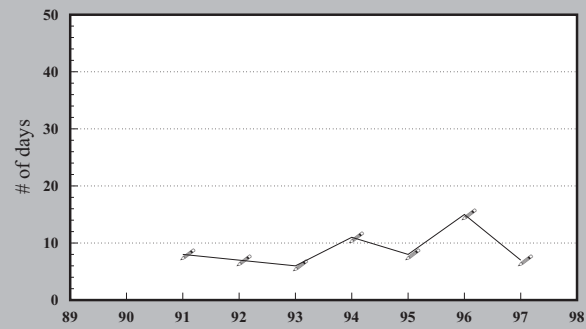


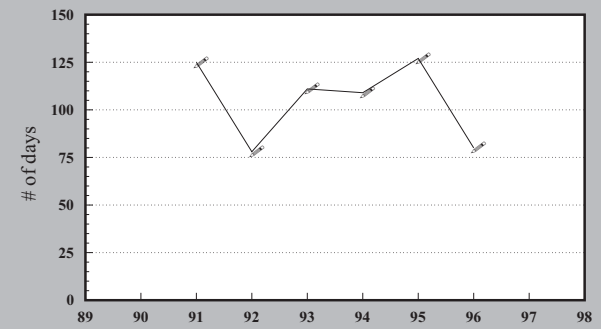
Fig. 2A-16b. Snow depth (cm) on ground on the last day of the month for Harbour Deep, 1990-1997. (missing data may not allow estimation for some years)



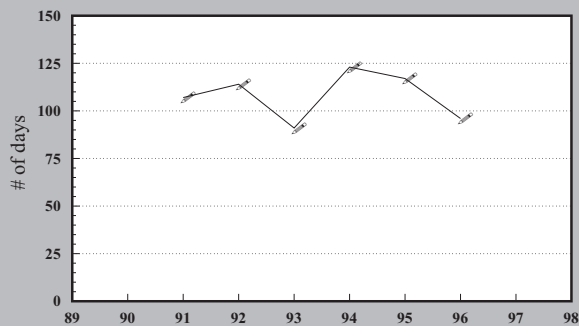
c. Snowfall



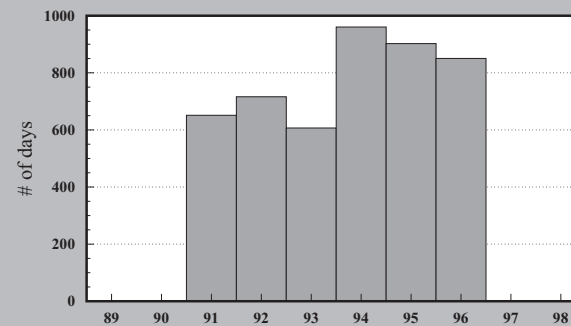
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-16c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Harbour Deep, 1990 - 1997. (missing data may not allow estimation for some years)

Table 2A-16a. Monthly maximum temperature (°C) for Hope Brook.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1989	-	-	-	-	-	25.0	26.5	26.0	22.0	14.5	11.5	4.5
1990	8.0	4.0	3.0	12.5	18.5	21.0	25.5	29.0	21.0	21.5	13.0	7.5
1991	2.0	5.0	6.5	14.5	17.0	24.0	27.0	23.0	21.5	20.5	13.0	7.0
1992	4.5	1.0	10.0	9.0	17.0	22.0	24.5	24.5	23.5	15.0	10.5	6.0
1993	5.0	4.0	11.0	9.5	16.0	24.0	27.0	25.0	23.5	14.0	11.0	12.0
1994	5.0	4.0	5.0	11.5	16.0	25.5	24.5	24.0	24.5	16.5	12.0	6.0
1995	8.0	2.5	7.5	10.5	17.5	26.0	27.5	31.0	23.0	16.0	12.5	5.5
1996	6.0	6.0	8.5	15.0	17.5	23.5	23.0	30.0	26.5	14.0	10.5	10.0
1997	6.0	3.0	3.5	8.5	13.5	22.5	25.0	22.0	-	-	-	-

Table 2A-16b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Hope Brook.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1990	22	300.6	-	-	-	-	-
1991	17	253.0	25	-	-	-	0
1992	20	393.5	-	15	90	100	35
1993	18	79.6	-	-	-	-	-
1994	25	324.3	-	-	-	-	-
1995	12	413.5	-	-	-	-	-
1996	29	207.1	-	-	-	-	0
1997	16	217.5	-	-	-	-	-

Table 2A-16c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Hope Brook.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1989	-	1116.7	128
1990	-	1117.6	134
1991	151	1064.4	143
1992	155	984.9	135
1993	146	979.1	144
1994	136	1158.6	129
1995	167	1085.2	140
1996	148	988.9	130
1997	-	1019.5	133

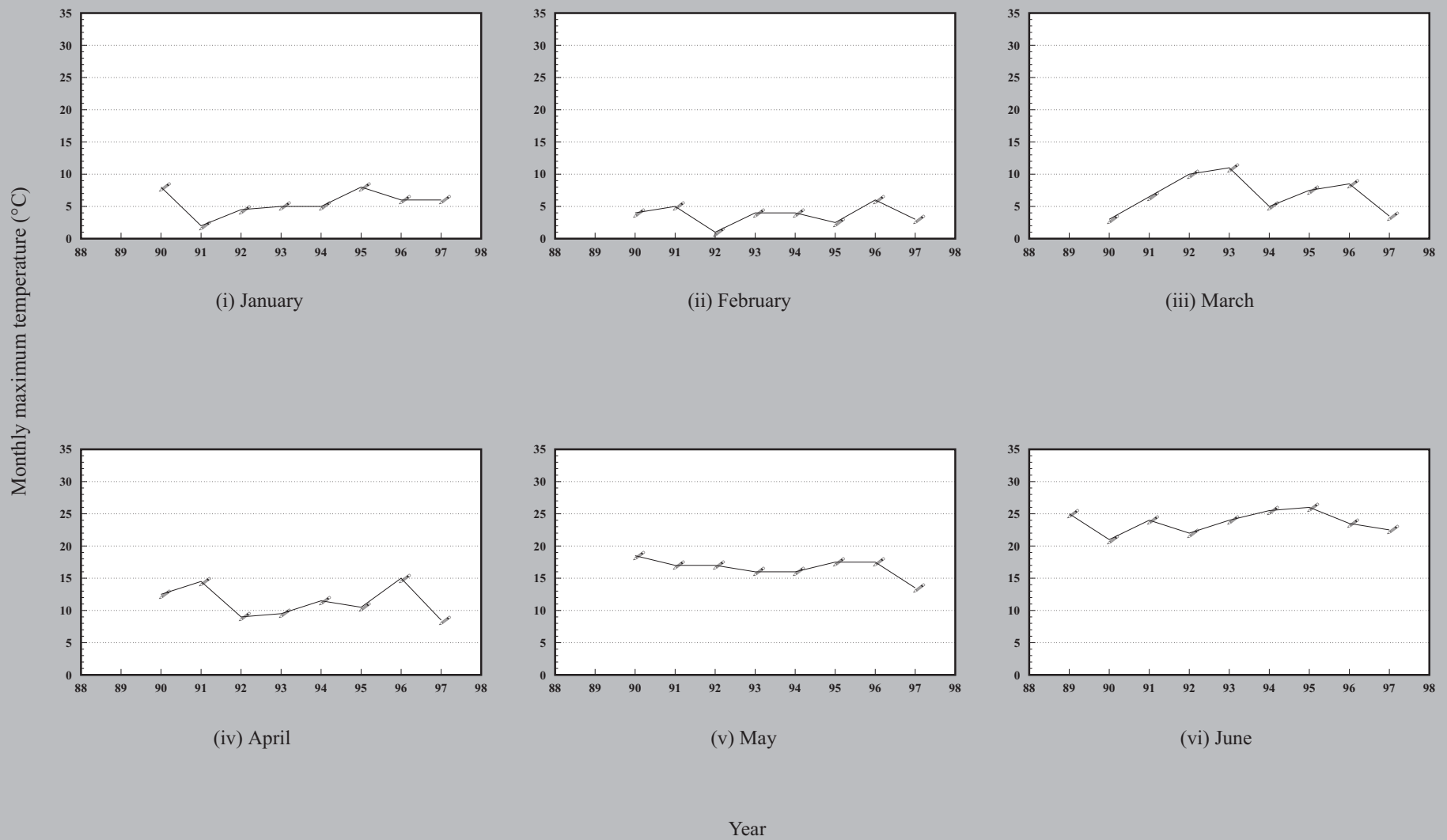


Fig. 2A-17a. Monthly maximum temperature (°C) for Hope Brook, 1990 - 1997. (missing data may not allow estimation for some years)

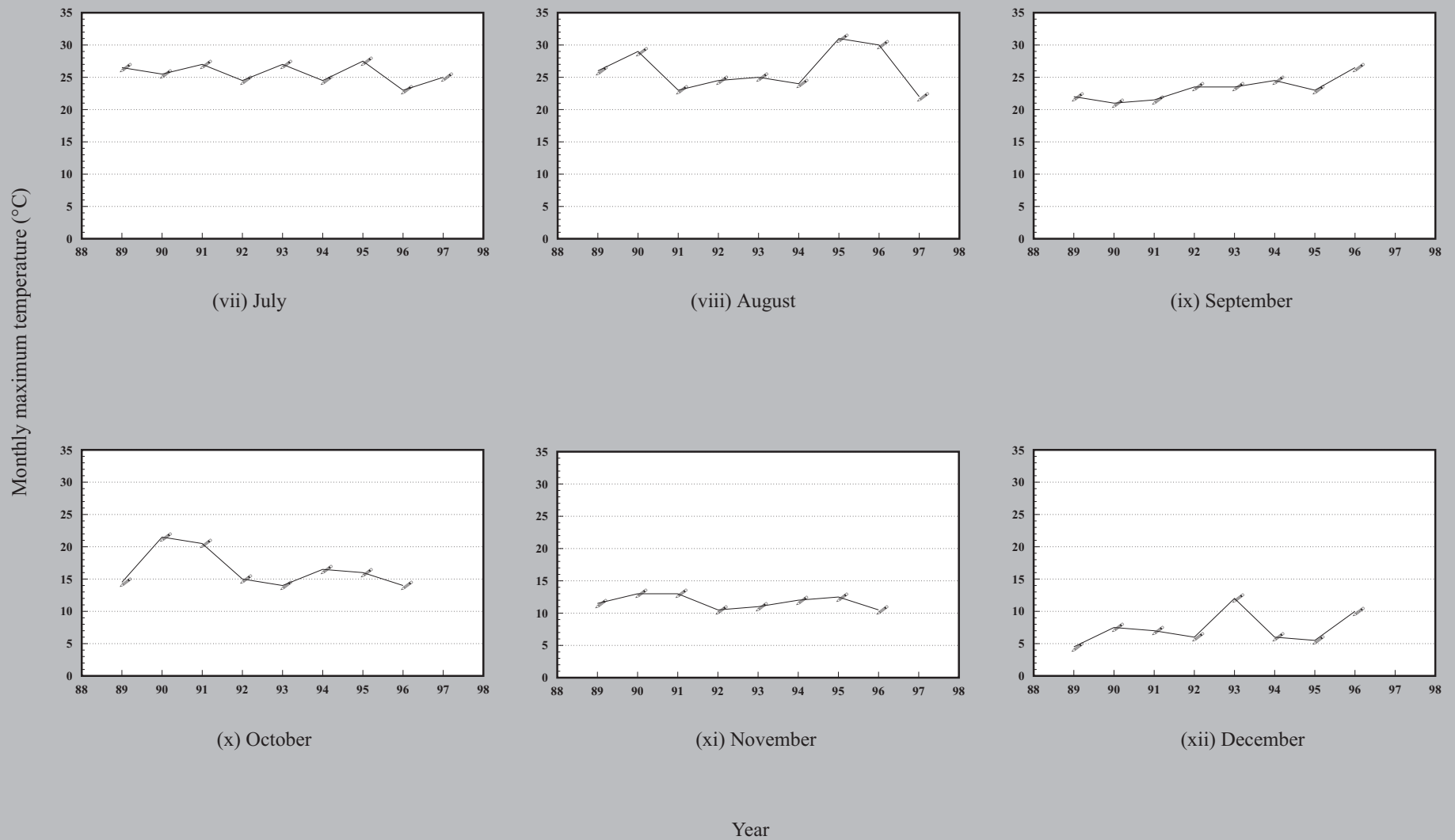


Fig. 2A-17a (con'd). Monthly maximum temperature (°C) for Hope Brook, 1990 - 1997. (missing data may not allow estimation for some years)

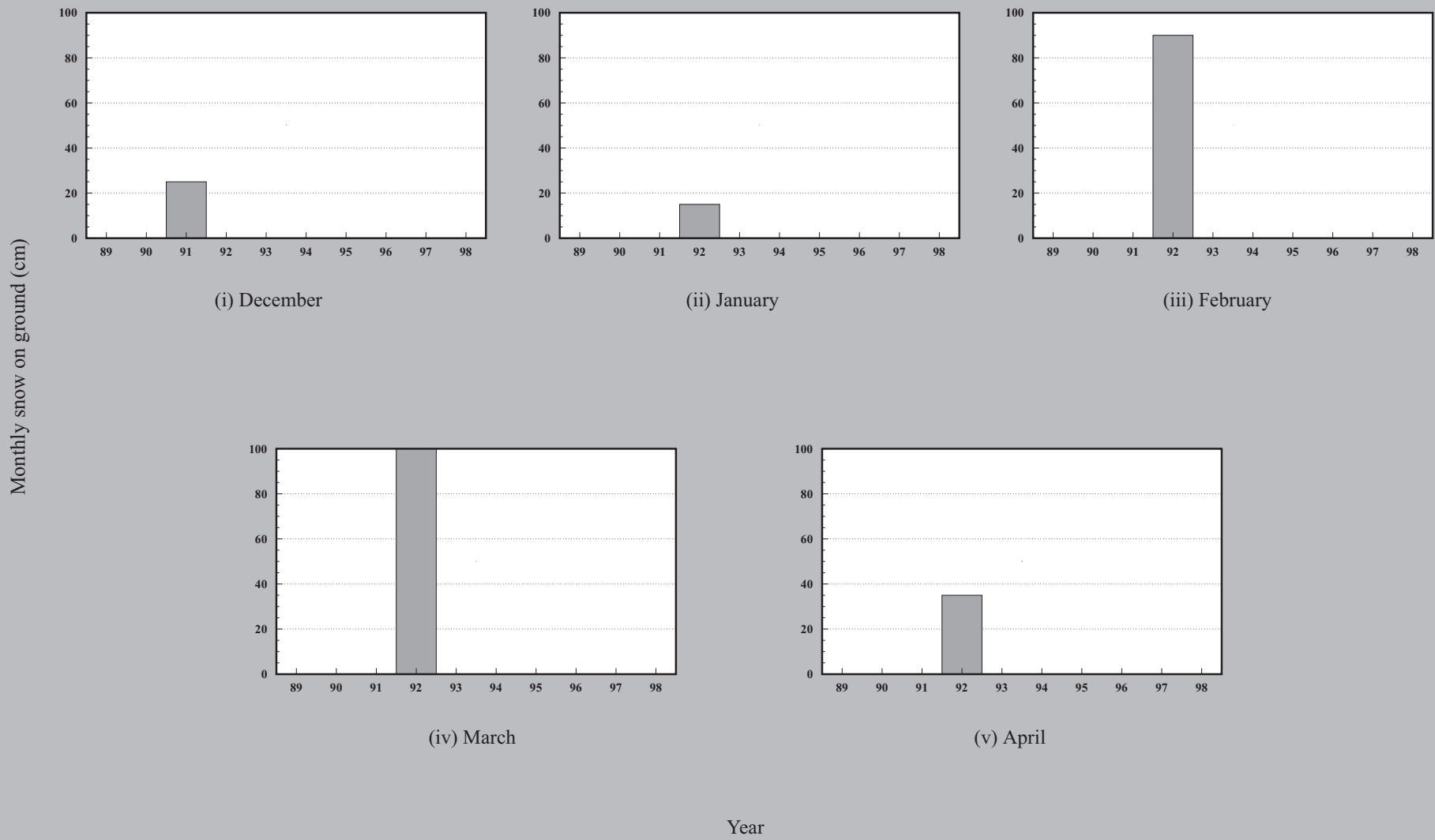
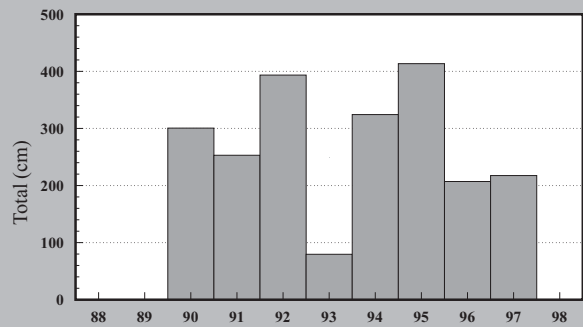
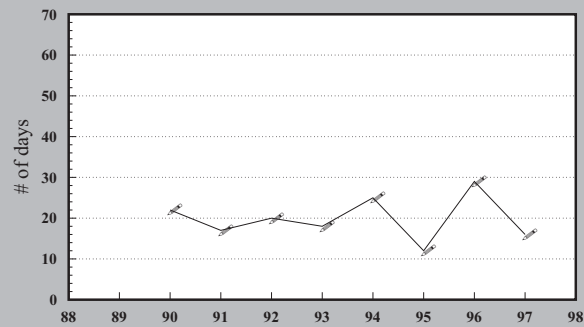


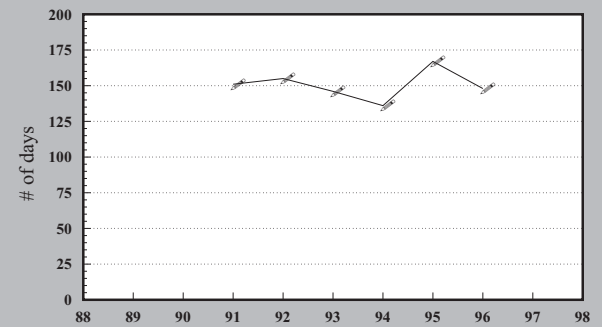
Fig. 2A-17b. Snow depth (cm) on ground on the last day of the month for Hope Brook 1990-1997. (missing data may not allow estimation for some years)



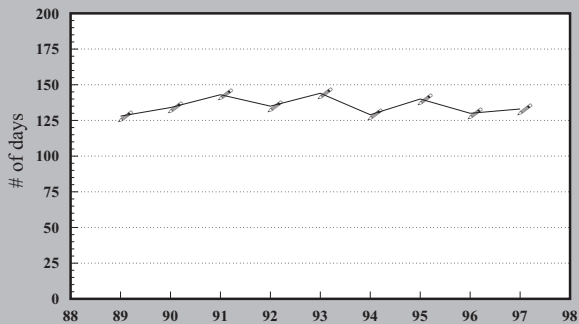
c. Snowfall



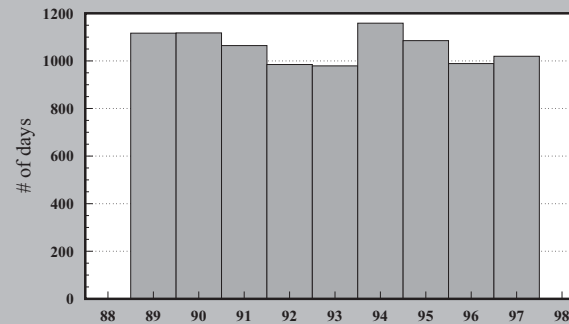
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-17c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Hope Brook, 1990 - 1997. (missing data may not allow estimation for some years)

Table 2A-17a. Monthly maximum temperature (°C) for Middle Arm.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1988	-	-	-	-	-	-	-	-	25.0	20.5	14.5	4.5
1989	7.0	8.0	10.0	12.5	22.5	29.0	30.0	30.5	27.0	18.5	17.5	3.5
1990	8.0	3.5	10.0	11.0	24.0	33.0	28.5	31.5	26.0	20.0	10.5	11.5
1991	0.0	10.0	8.0	13.0	22.5	24.0	30.0	30.5	22.5	18.5	17.5	8.5
1992	8.0	2.0	11.0	-	-	21.0	28.0	28.0	26.0	15.0	-	-
1993	0.0	-	-	15.5	21.0	26.0	27.5	30.0	24.0	18.0	15.0	10.0
1994	8.0	3.0	9.5	11.5	19.0	28.5	29.5	29.0	21.5	22.0	13.5	6.0
1995	8.5	8.0	8.5	10.5	17.0	24.0	30.0	30.0	24.0	19.0	17.0	4.5
1996	11.5	12.0	9.5	21.0	19.0	26.0	27.5	32.0	28.5	19.5	17.0	12.5
1997	9.0	3.5	6.5	8.5	20.0	26.0	27.5	28.0	24.0	-	-	-

Table 2A-17b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Middle Arm.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1988	-	-	55	-	-	-	-
1989	8	228.2	68	78	54	60	-
1990	7	214.0	16	48	72	48	-
1991	4	183.4	26	49	62	28	-
1992	5	123.8	-	20	44	36	-
1993	-	-	57	38	-	117	-
1994	9	344.6	64	55	100	92	-
1995	2	357.2	8	142	196	184	32
1996	33	160.0	-	6	7	-	-
1997	21	276.6	-	5	34	50	46

Table 2A-17c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Middle Arm.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1989	135	1353.6	135
1990	138	1329.5	148
1991	142	931.0	121
1992	-	940.0	137
1993	135	816.7	104
1994	131	1083.9	110
1995	130	1081.0	123
1996	102	993.8	95

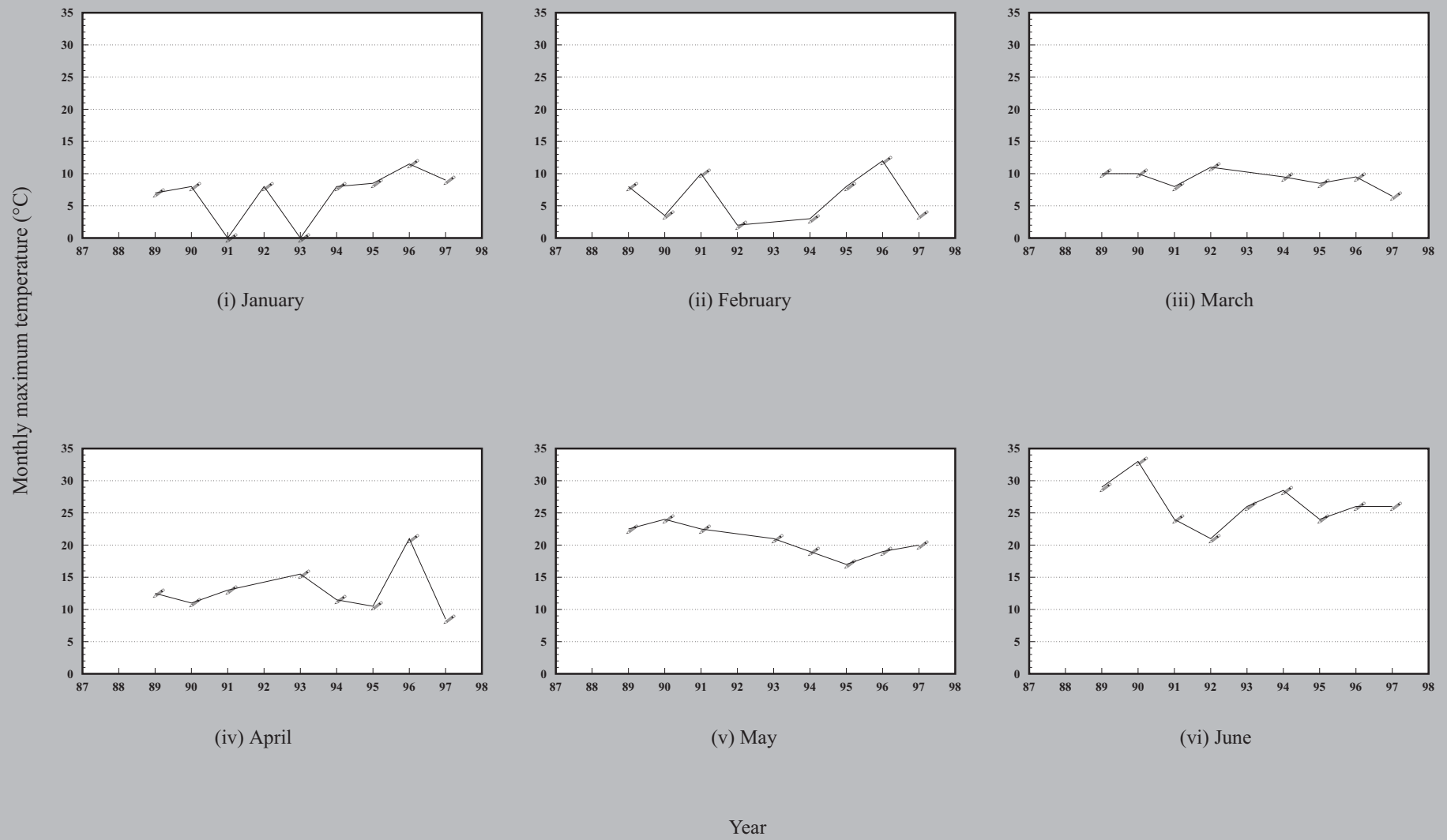


Fig. 2A-18a. Monthly maximum temperature (°C) for Middle Arm, 1988 - 1997. (missing data may not allow estimation for some years)

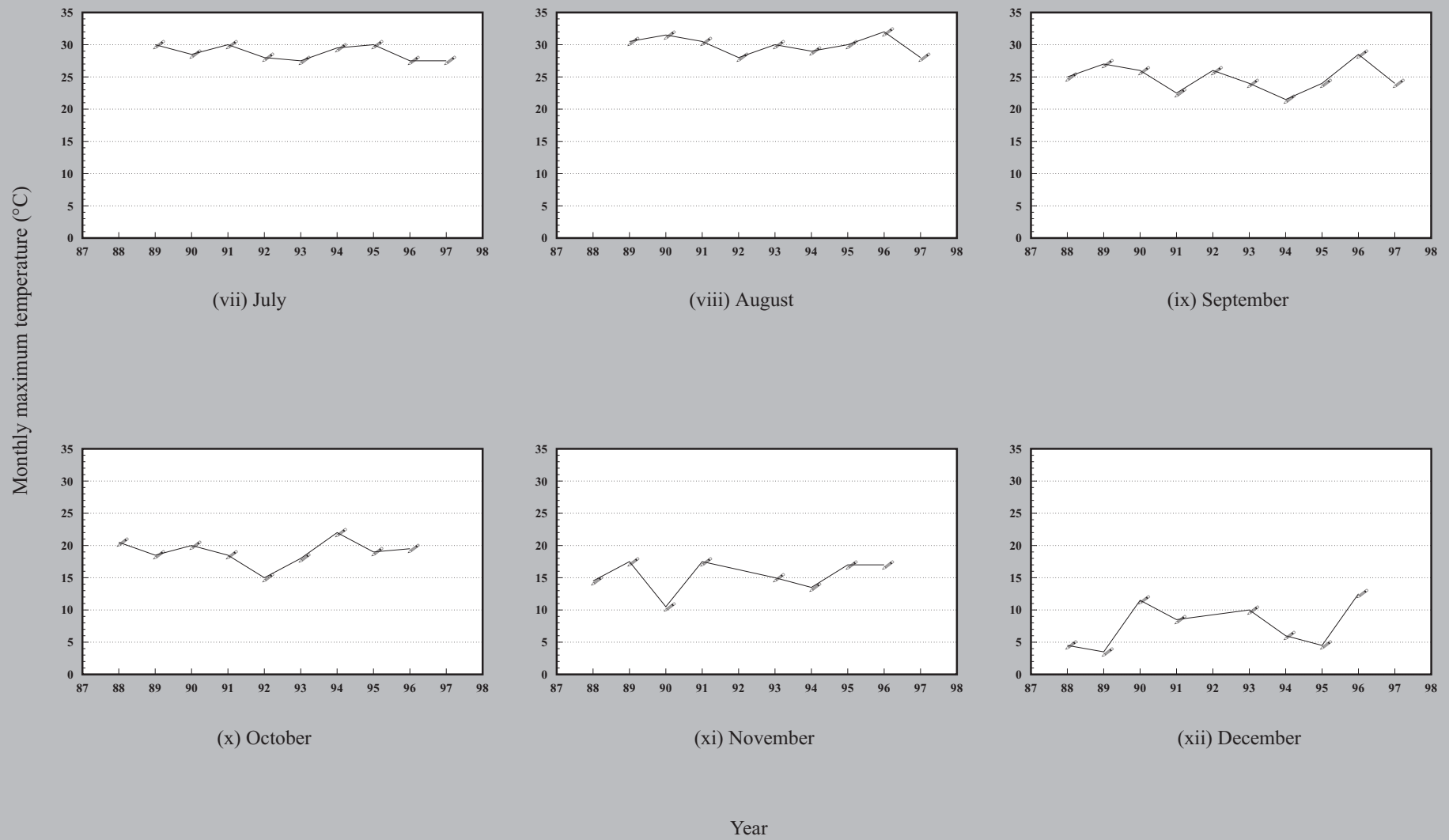


Fig. 2A-18a (con'd). Monthly maximum temperature (°C) for Middle Arm, 1988 - 1997. (missing data may not allow estimation for some years)

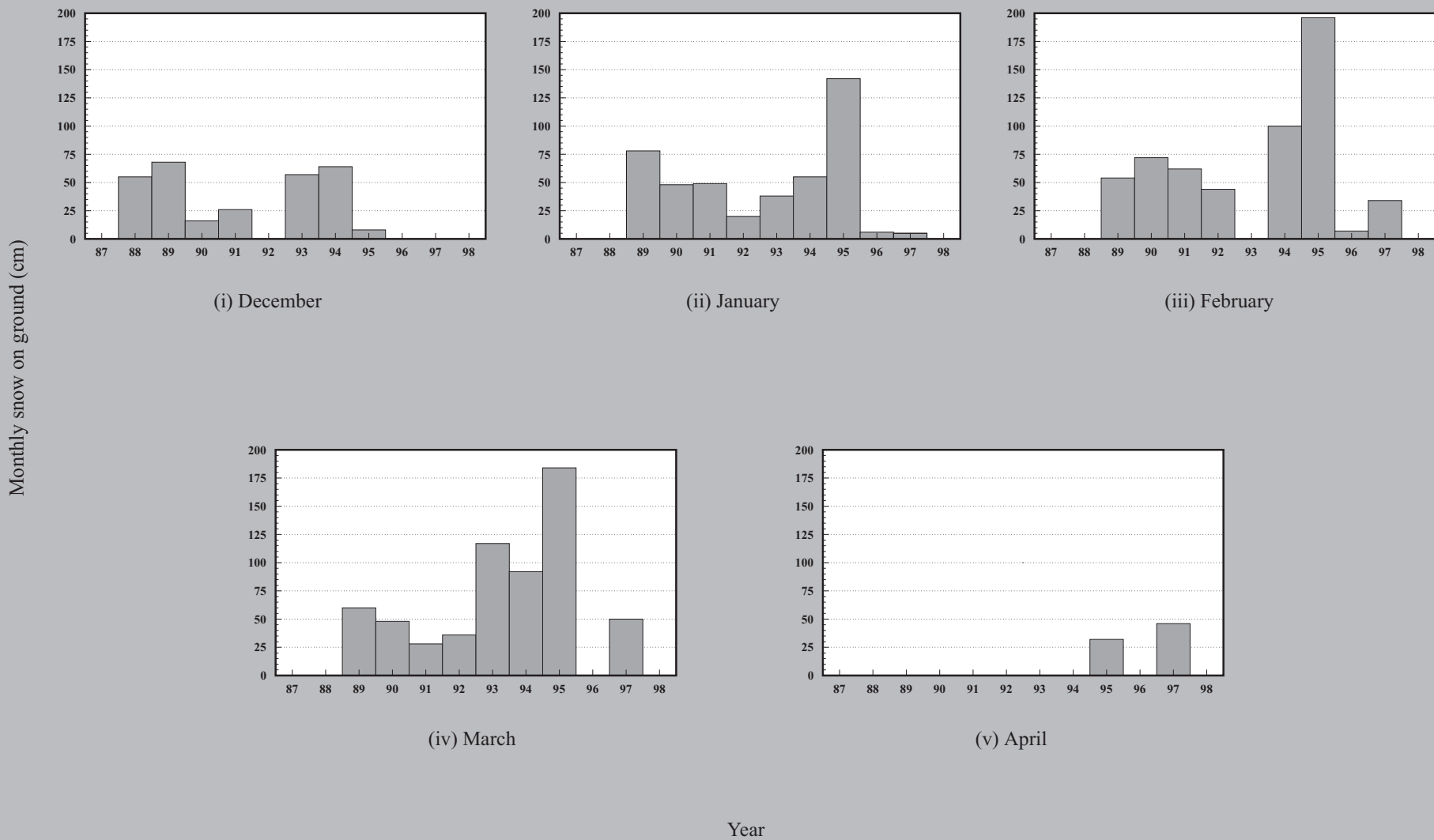
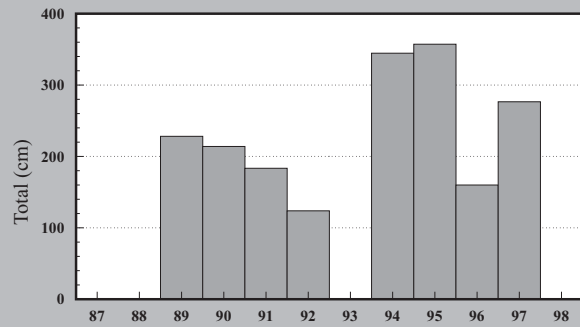
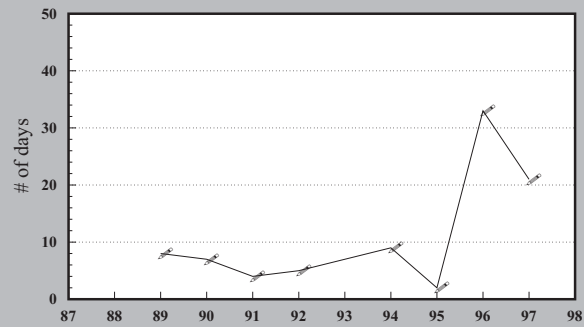


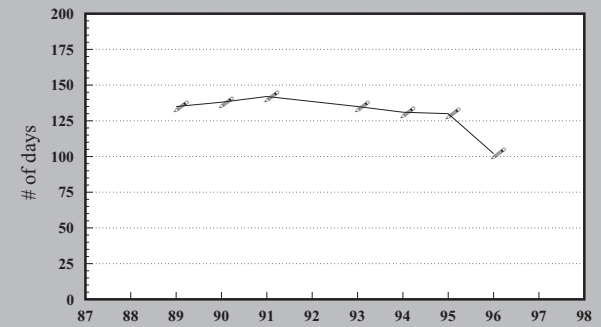
Fig. 2A-18b. Snow depth (cm) on ground on the last day of the month for Middle Arm, 1988 - 1997. (missing data may not allow estimation for some years)



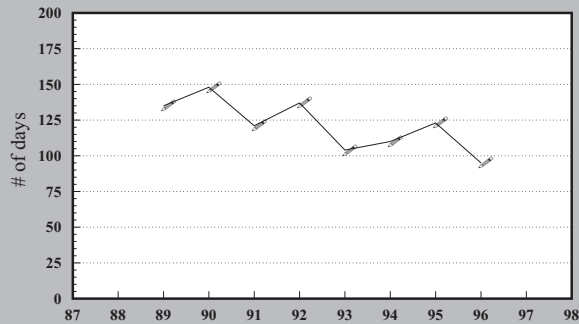
c. Snowfall



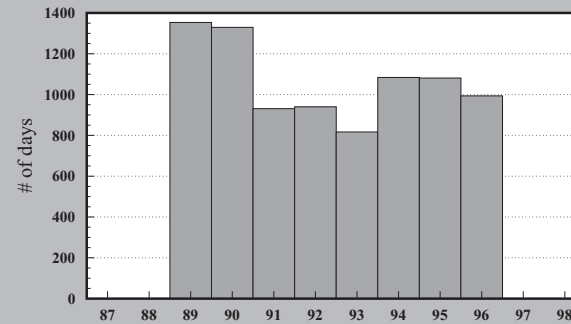
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-18c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Middle Arm, 1988 - 1997. (missing data may not allow estimation for some years)

Table 2A-18a. Monthly maximum temperature (°C) for Port aux Basques.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1955	-	-	-	-	-	-	-	-	30.0	25.0	10.6	3.3
1956	9.4	3.3	4.4	7.2	17.8	15.6	27.8	26.1	20.6	18.9	13.3	7.8
1957	4.4	2.2	6.1	12.8	11.7	17.2	19.4	20.6	18.3	17.2	11.7	8.9
1958	7.2	4.4	11.1	9.4	13.3	16.7	20.0	20.0	18.3	12.2	10.0	6.1
1959	4.4	4.4	2.8	8.9	22.2	18.9	23.9	21.1	21.7	13.9	11.1	7.8
1960	7.2	8.3	3.9	12.2	20.0	20.0	19.4	23.3	17.8	15.6	9.4	7.8
1961	2.8	2.8	6.7	11.1	12.8	17.8	21.1	22.2	22.2	16.7	13.9	6.7
1962	5.6	6.1	10.0	7.2	13.9	17.2	20.6	21.7	17.8	15.0	13.9	9.4
1963	7.8	2.8	3.3	8.3	14.4	21.7	25.6	20.0	16.7	15.0	12.2	8.3
1964	3.9	3.3	5.6	8.9	13.3	16.7	18.9	20.0	17.8	12.8	7.8	7.2
1965	3.9	5.0	8.3	7.2	15.6	18.3	20.0	26.7	21.1	12.2	10.0	7.2
1966	5.0	4.4	10.6	8.9	14.4	15.6	18.3	22.2	18.3	13.3	14.4	10.6
1967	5.0	2.8	3.9	7.2	8.9	17.8	22.2	22.8	22.8	17.8	12.8	7.2
1968	4.4	5.0	5.6	10.0	16.7	15.0	22.2	20.6	22.2	16.1	10.0	8.3
1969	6.1	4.4	8.3	6.1	14.4	20.0	19.4	21.1	18.9	15.0	11.1	10.0
1970	2.2	7.2	4.4	6.7	13.9	18.3	21.7	27.2	16.1	16.1	11.7	8.3
1971	6.1	5.6	5.0	11.7	12.8	18.9	20.6	21.7	18.9	13.9	11.1	6.1
1972	6.1	3.3	4.4	6.1	11.1	16.1	20.0	20.0	20.0	14.4	8.3	7.2
1973	6.1	4.4	3.9	7.2	12.2	21.7	20.6	21.1	21.7	12.8	9.4	8.3
1974	3.9	4.4	3.3	9.4	12.2	18.3	18.3	23.3	18.9	13.3	8.9	7.2
1975	3.9	1.7	2.8	10.6	13.9	23.3	22.2	23.3	18.9	16.1	10.6	6.7
1976	5.0	8.9	9.4	7.8	14.4	22.2	19.4	22.2	18.3	15.6	10.0	7.8
1977	5.3	5.2	5.8	11.8	14.4	22.8	19.2	23.3	20.0	14.1	12.4	7.6
1978	6.2	6.0	3.6	6.0	15.3	15.1	21.5	21.9	20.6	12.2	10.2	5.7
1979	9.9	8.4	9.6	8.4	14.3	20.3	19.2	21.2	17.6	13.2	11.3	7.7
1980	4.9	1.5	7.2	12.1	11.4	17.1	22.2	21.7	18.3	13.2	10.3	7.4
1981	5.4	6.3	7.7	8.3	14.8	17.6	20.3	21.0	22.1	14.8	12.2	9.7
1982	5.6	4.3	6.8	5.3	16.9	18.9	22.6	22.7	21.0	15.4	15.0	9.1
1983	7.1	5.0	11.2	9.9	12.4	20.9	20.1	20.0	21.8	16.5	11.7	8.0
1984	5.0	6.3	5.0	15.6	15.7	20.4	22.5	24.5	20.7	18.3	10.5	7.8

Table 2A-18a (con'd). Monthly maximum temperature (°C) for Port aux Basques.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1985	2.0	4.2	4.8	8.7	17.0	19.2	20.7	22.9	20.2	15.8	12.6	8.3
1986	6.2	4.4	6.2	11.2	18.7	17.6	22.5	25.8	18.7	14.8	9.4	6.4
1987	2.1	4.4	8.6	13.2	21.2	20.7	21.8	23.0	20.2	16.1	9.8	6.7
1988	4.0	3.9	8.1	10.2	17.5	17.2	23.4	24.7	19.3	17.2	10.3	4.9
1989	3.4	4.5	4.6	8.5	13.0	20.4	22.0	24.4	19.5	13.3	11.8	4.7
1990	6.1	3.7	4.5	9.8	15.1	20.2	22.0	24.5	19.9	16.0	11.0	7.7
1991	3.2	3.8	7.3	12.3	18.0	20.0	22.5	22.1	19.5	18.2	11.6	8.5
1992	5.5	2.0	5.0	6.5	19.8	23.5	20.1	22.6	21.0	14.8	10.3	6.8
1993	5.2	3.8	6.4	8.5	14.5	19.4	26.8	25.8	21.0	15.0	11.3	10.7
1994	5.5	2.6	5.4	11.8	14.7	25.3	25.1	26.0	21.7	16.7	12.8	6.4
1995	8.2	3.6	8.4	10.1	18.8	20.1	23.8	25.0	20.4	16.2	13.2	8.2
1996	8.4	8.0	7.0	13.4	14.0	19.6	21.1	26.4	24.1	14.8	9.7	10.0
1997	6.0	3.0	4.0	18.2	-	19.6	20.9	-	-	-	-	-
Normal	-1.5	-2.6	-0.1	3.5	7.9	12.3	16.3	17.9	14.8	10.0	5.6	1.0

Table 2A-18b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Port aux Basques.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1956	28	397.0	0	0	0	61	0
1957	20	260.8	0	66	84	-	0
1958	31	57.4	8	-	33	-	0
1959	18	190.7	3	61	99	81	-
1960	17	221.2	-	25	-	-	-
1961	12	258.6	3	94	117	91	0
1962	34	170.0	-	13	-	0	0
1963	27	172.5	46	8	-	-	0
1964	29	361.3	0	48	89	89	0
1965	26	328.5	15	81	76	15	0
1966	26	217.4	3	23	13	0	0
1967	18	350.8	0	5	107	56	0
1968	37	272.0	8	13	8	20	0
1969	33	297.2	0	0	0	0	0
1970	18	248.2	10	33	25	8	0
1971	34	318.0	23	13	3	3	0
1972	27	269.3	25	5	23	5	0
1973	23	337.3	0	13	48	23	0
1974	29	370.4	25	36	53	74	3
1975	22	391.9	5	69	91	64	0
1976	35	322.6	8	5	10	0	0
1977	25	285.3	8	13	15	1	0
1978	32	278.1	14	12	8	12	0
1979	32	233.7	1	0	24	3	0
1980	27	205.9	8	62	99	7	0
1981	34	155.0	21	25	0	0	0
1982	25	345.2	0	106	178	30	1
1983	43	197.1	34	9	21	3	0
1984	38	235.8	13	13	4	3	0
1985	20	410.0	35	135	48	20	0
1986	37	325.5	3	21	27	4	0
1987	30	245.4	44	34	43	1	0
1988	43	295.0	27	24	8	2	0
1989	23	358.2	88	61	54	27	1
1990	28	474.1	5	85	118	33	0
1991	30	412.9	29	110	61	2	0
1992	22	357.3	14	8	74	20	0
1993	27	333.9	98	43	41	13	0
1994	35	422.2	24	53	100	14	0
1995	29	364.0	2	58	96	7	0
1996	39	232.9	3	3	9	2	0
1997	28	366.9	-	12	38	9	8
Normal	29	292.1	16	35	47	20	0

Table 2A-18c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Port aux Basques.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1956	137	866.4	122
1957	153	828.5	135
1958	160	910.9	139
1959	148	939.2	138
1960	179	1035.7	156
1961	167	1012.8	143
1962	169	867.1	141
1963	152	895.2	139
1964	153	828.3	140
1965	149	816.7	115
1966	166	907.9	154
1967	166	1022.8	127
1968	170	962.2	156
1969	158	929.9	144
1970	152	1076.4	144
1971	164	914.4	129
1972	144	857.7	139
1973	176	938.2	152
1974	163	819.9	131
1975	159	1015.1	122
1976	177	946.5	127
1977	174	931.1	149
1978	160	850.7	121
1979	184	916.1	149
1980	149	828.6	136
1981	183	1110.1	161
1982	151	887.9	137
1983	173	1087.9	153
1984	178	1077.4	141
1985	147	1027.3	144
1986	162	880.5	133
1987	140	1067.1	140
1988	174	893.8	129
1989	165	1005.4	134
1990	156	1046.9	148
1991	157	925.6	149
1992	173	972.8	147
1993	151	985.4	149
1994	148	1098.2	128
1995	180	1111.3	162
1996	174	1049.2	139
Normal	-	1011.0	-

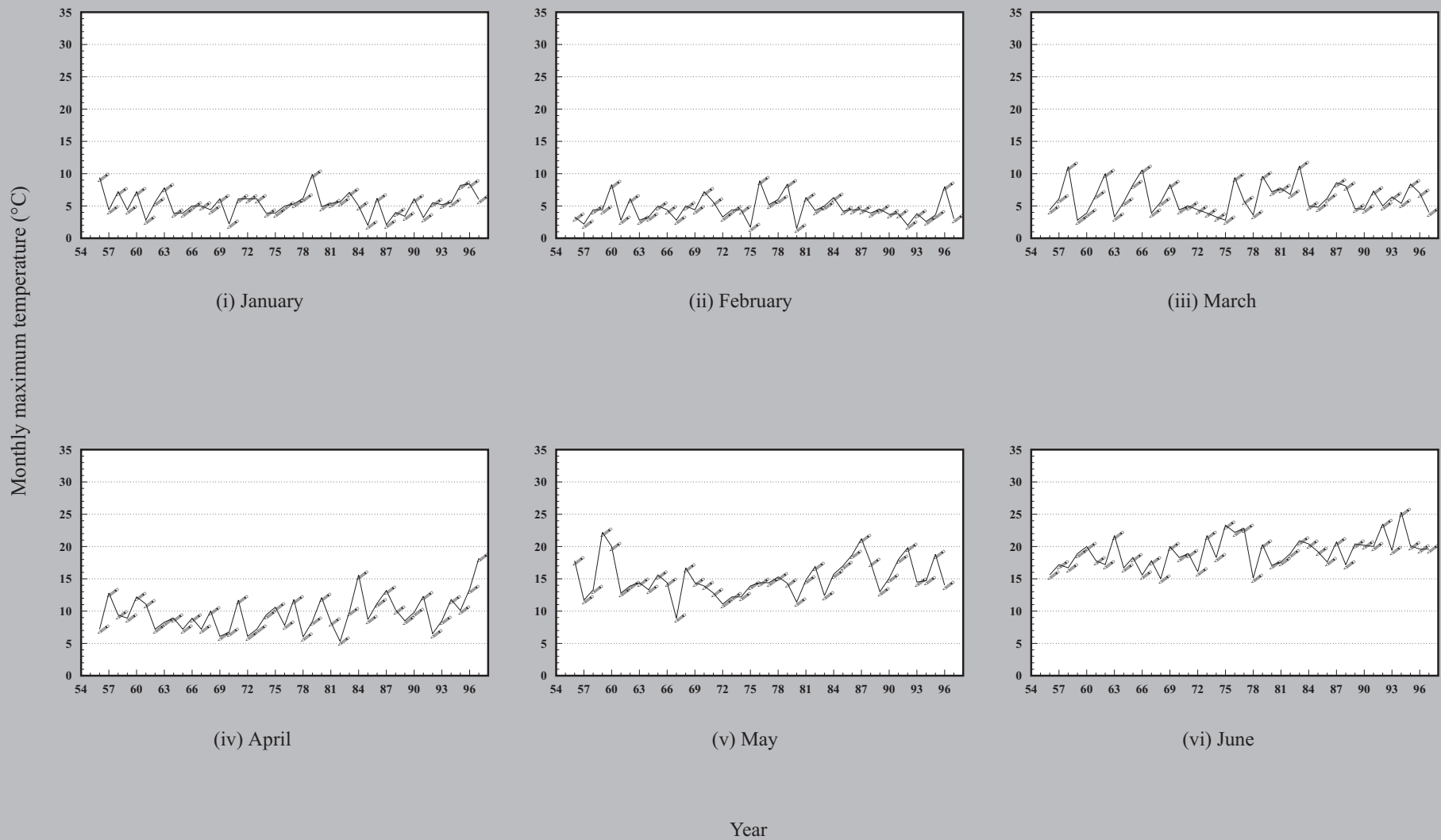


Fig. 2A-19a. Monthly maximum temperature (°C) for Port aux Basques, 1955 - 1997. (missing data may not allow estimation for some years)

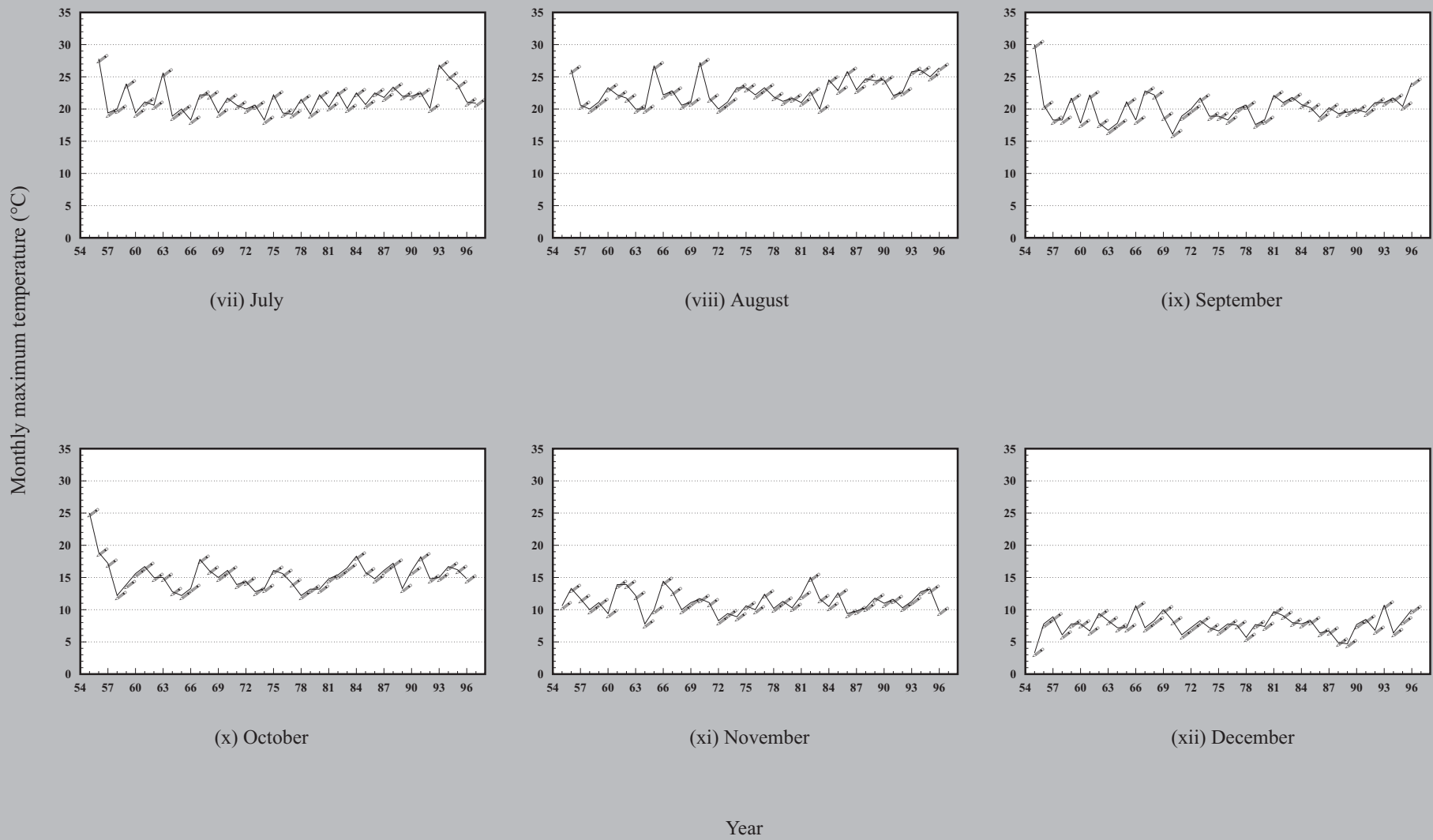


Fig. 2A-19a (con'd). Monthly maximum temperature (°C) for Port aux Basques, 1955 - 1997. (missing data may not allow estimation for some years)

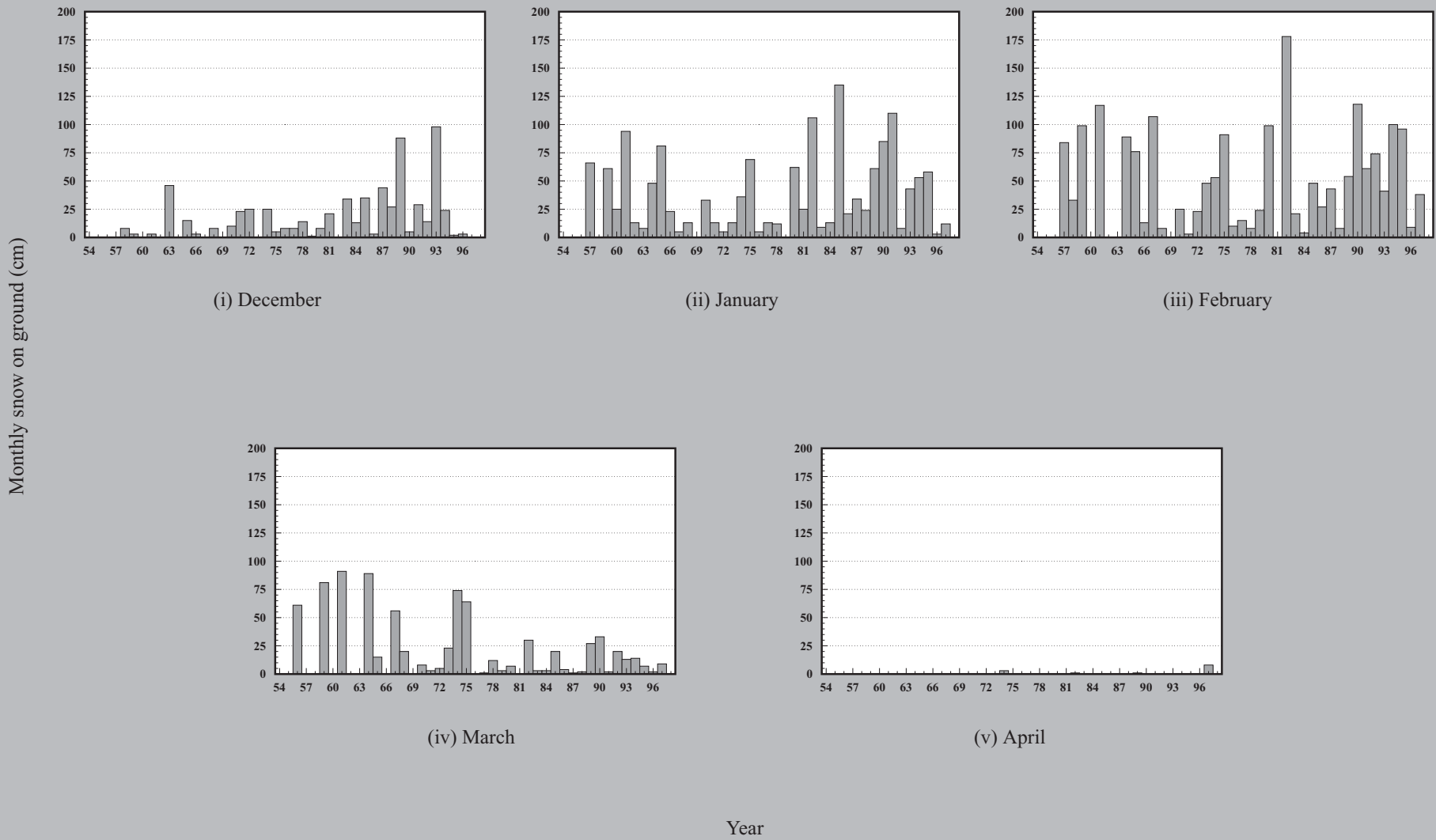
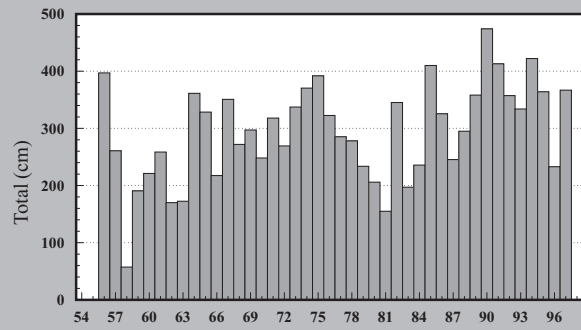
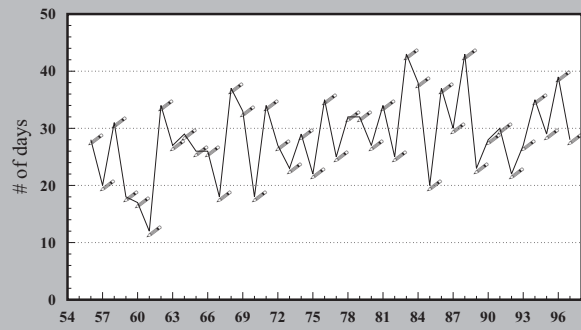


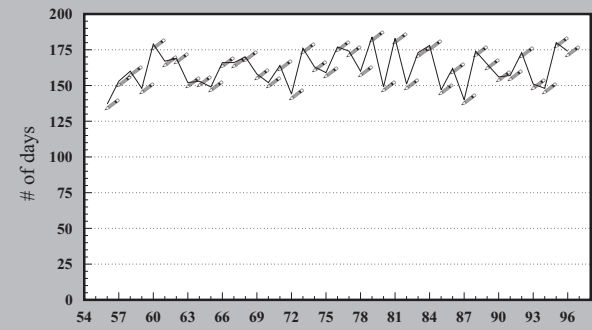
Fig. 2A-19b. Snow depth (cm) on ground on the last day of the month for Port aux Basques, 1955 - 1997. (missing data may not allow estimation for some years)



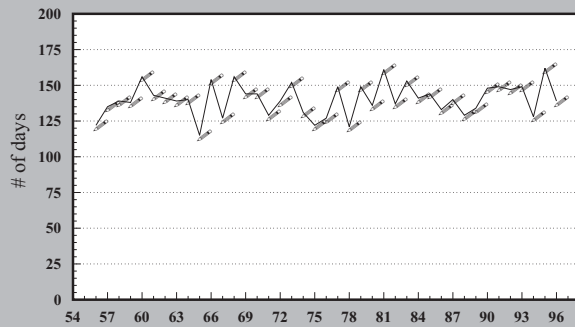
c. Snowfall



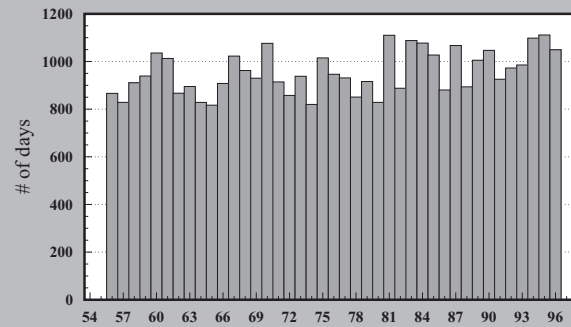
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-19c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Port aux Basques, 1955 - 1997. (missing data may not allow estimation for some years)

Table 2A-19a. Monthly maximum temperature (°C) for Port Saunders.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1980	5.0	3.0	3.5	16.0	10.0	21.0	24.0	21.0	18.0	14.0	11.0	6.0
1981	8.0	11.0	7.5	9.5	21.0	22.0	22.0	17.0	21.0	18.5	12.0	10.0
1982	2.5	-1.0	8.0	10.0	20.0	17.5	27.0	24.0	20.0	16.0	17.5	10.0
1983	8.5	6.5	11.5	17.5	21.0	23.0	27.5	23.0	26.0	17.0	10.0	6.0
1984	4.0	4.0	11.0	17.5	24.0	22.0	27.5	27.0	24.0	10.0	10.5	6.0
1985	5.0	6.0	6.5	8.0	19.5	22.0	28.0	25.0	18.0	16.0	8.5	7.0
1986	11.0	2.5	8.5	17.5	18.0	24.5	26.0	23.0	22.5	14.5	8.0	6.0
1987	0.0	0.0	12.5	14.0	18.5	24.0	27.5	24.0	21.0	19.0	12.0	4.5
1988	4.0	5.5	13.0	12.5	18.5	22.5	24.0	25.5	19.5	17.0	12.0	-
1989	6.0	1.0	5.0	10.0	22.0	25.0	25.5	27.0	25.0	18.0	17.0	1.0
1990	4.0	-1.0	4.0	12.0	20.5	22.5	22.5	25.0	22.0	20.0	7.5	6.0
1991	-3.0	4.0	7.0	4.5	15.0	25.0	22.5	27.0	18.0	19.5	14.0	3.0
1992	6.0	0.0	10.0	8.0	20.0	25.5	23.0	22.5	24.0	16.0	7.0	2.0
1993	6.0	7.0	6.0	16.0	20.5	22.5	24.5	24.0	22.5	20.0	12.0	10.0
1994	5.0	0.0	7.5	6.5	18.0	20.0	23.0	28.5	17.0	12.0	10.0	3.5
1995	-1.0	4.0	6.0	8.5	19.0	24.0	27.0	25.0	19.5	18.0	18.0	5.0
1996	13.0	12.0	9.0	11.5	17.5	20.5	23.5	25.5	22.0	18.5	19.5	8.0
1997	8.0	0.0	4.0	8.0	12.0	21.0	27.5	-	20.0	-	-	-

Table 2A-19b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Port Saunders.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1980	1	253.7	28	0	0	0	0
1981	25	296.0	33	62	6		0
1982	8	325.9	0	160	215	200	105
1983	24	252.9	15	34	26	-	0
1984	14	261.0	29	27	50	21	0
1985	2	396.8	14	185	100	70	68
1986	19	367.0	40	33	70	48	0
1987	14	363.0	60	60	92	20	0
1988	10	455.0	-	82	140	38	0
1989	6	447.8	182	99	120	80	12
1990	10	452.0	68	234	310	360	30
1991	10	536.0	90	250	-	-	-
1992	9	605.0	100	118	215	60	40
1993	18	441.0	65	180	188	230	10
1994	12	399.0	62	100	162	125	15
1995	21	609.0	10	-	-	-	-
1996	40	213.0	23	10	5	5	0
1997	3	443.8	-	71	150	135	40

Table 2A-19c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Port Saunders.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1980	154	695.1	112
1981	174	1207.5	170
1982	106	759.3	110
1983	75	805.1	101
1984	82	941.0	116
1985	75	820.0	114
1986	72	731.2	105
1987	78	860.9	117
1988	83	825.5	121
1989	96	1009.8	136
1990	83	838.0	122
1991	77	742.4	120
1992	77	803.3	118
1993	96	761.0	114
1994	123	715.5	110
1995	94	734.8	94
1996	70	814.2	110

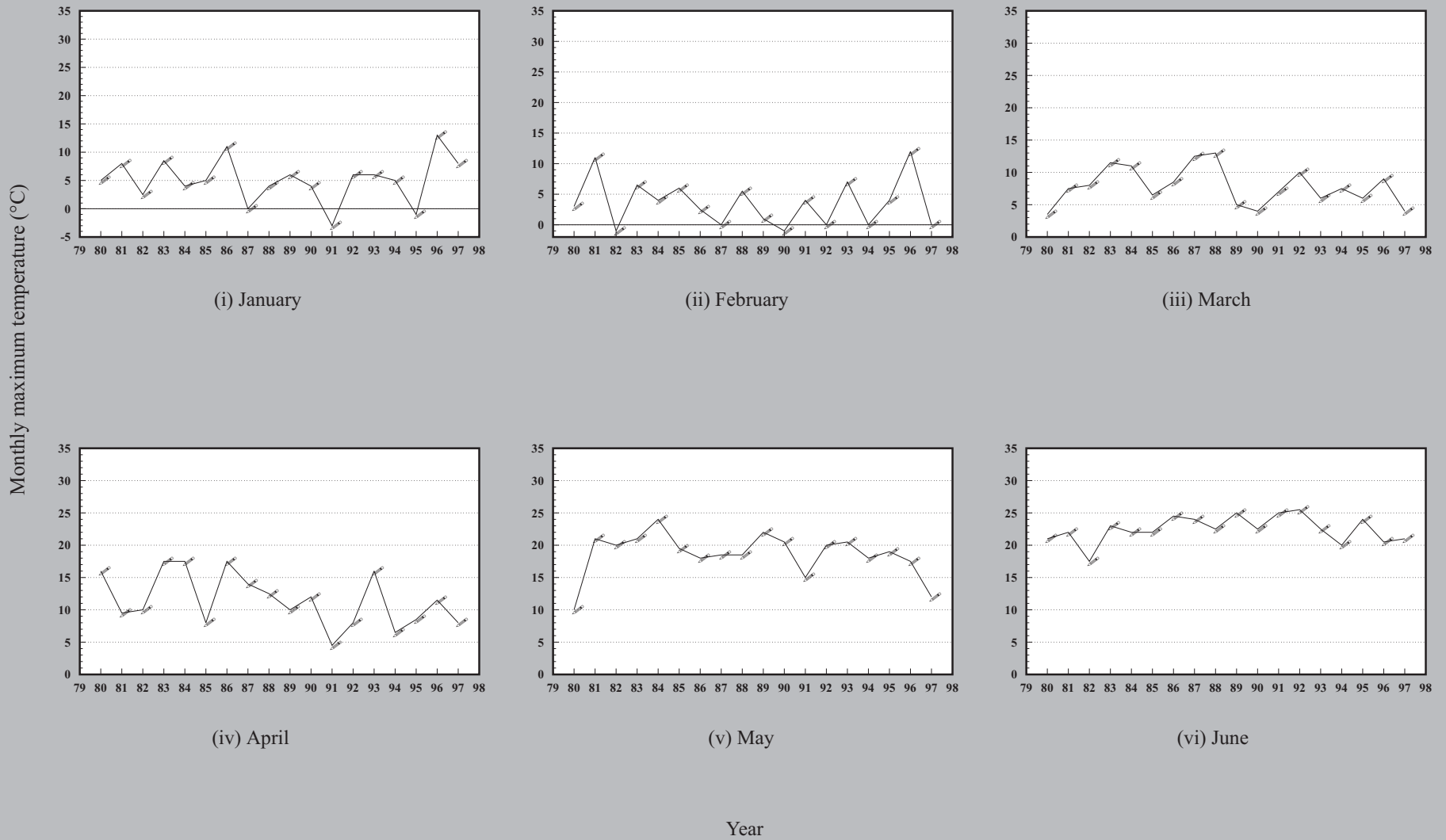


Fig. 2A-20a. Monthly maximum temperature (°C) for Port Saunders, 1980 - 1997. (missing data may not allow estimation for some years)

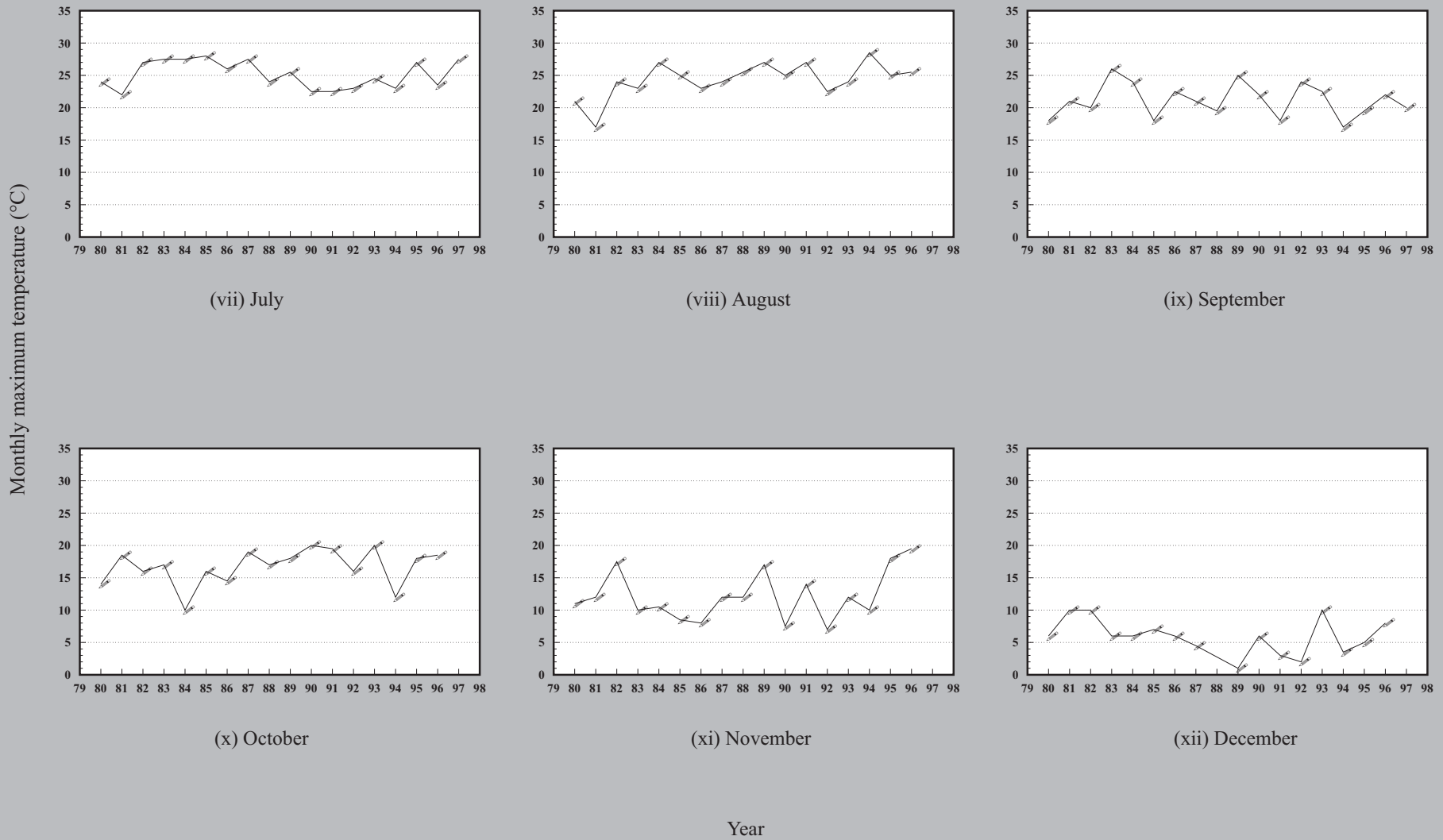


Fig. 2A-20a (con'd). Monthly maximum temperature (°C) for Port Saunders, 1980 - 1997. (missing data may not allow estimation for some years)

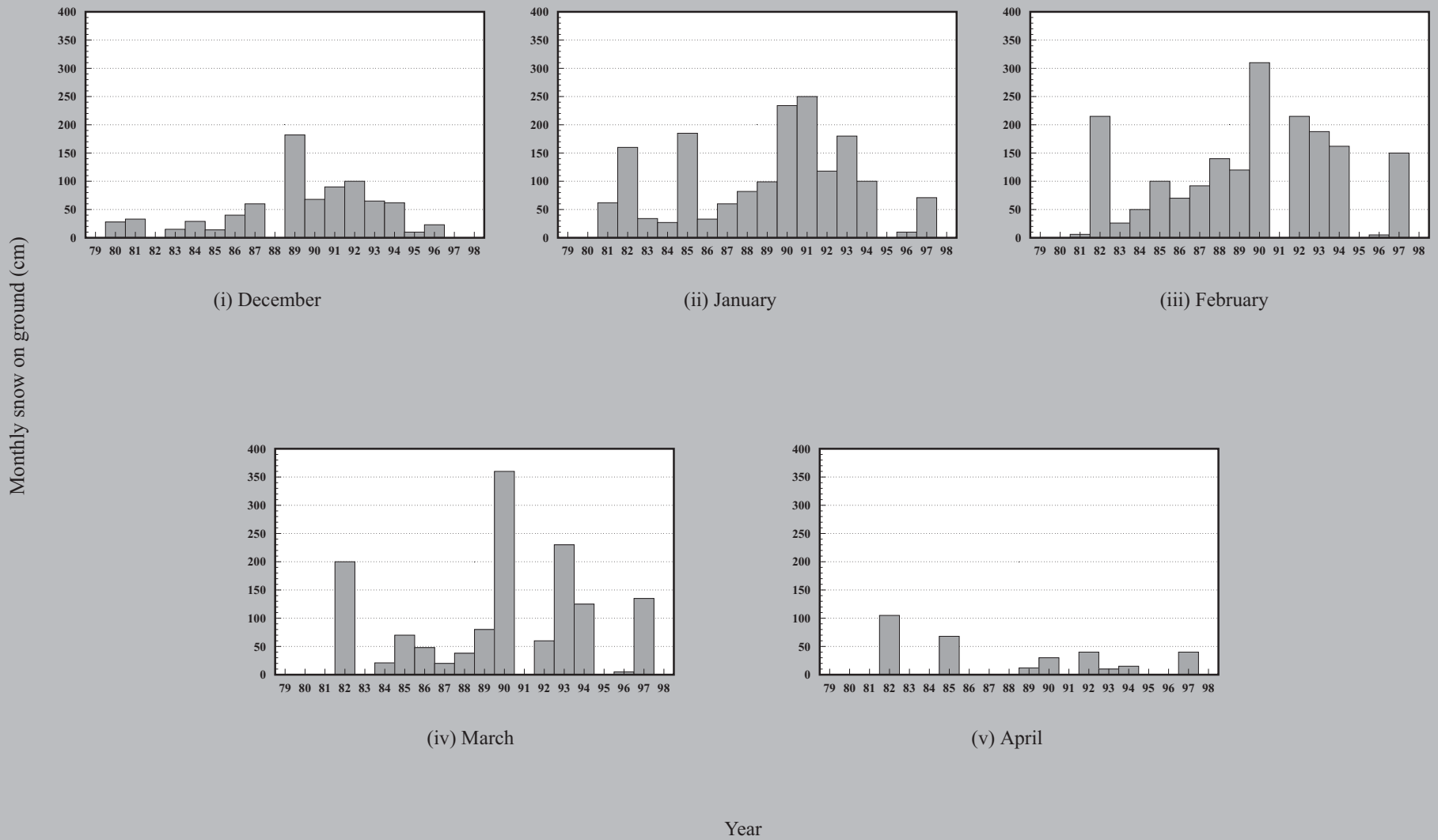
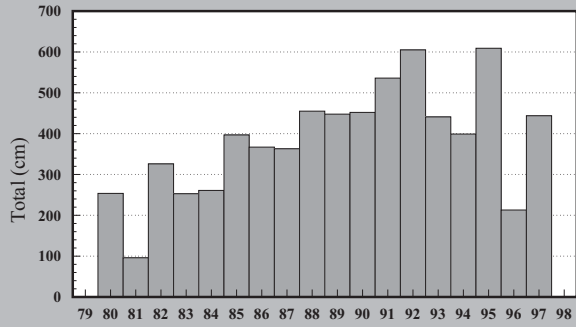
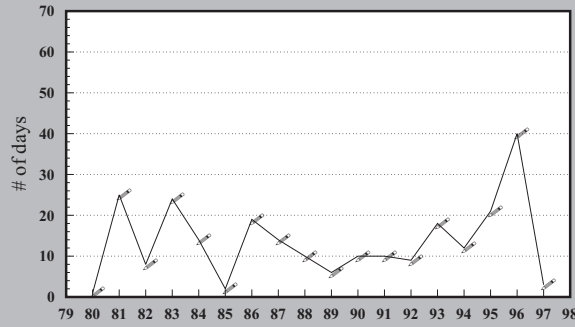


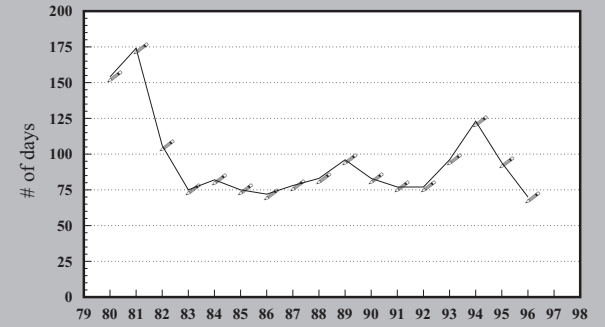
Fig. 2A-20b. Snow depth (cm) on ground on the last day of the month for Port Saunders, 1980 - 1997. (missing data may not allow estimation for some years)



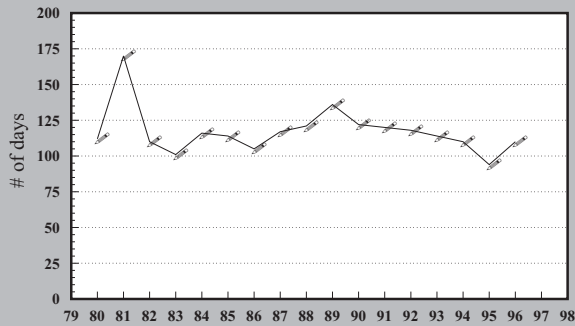
c. Snowfall



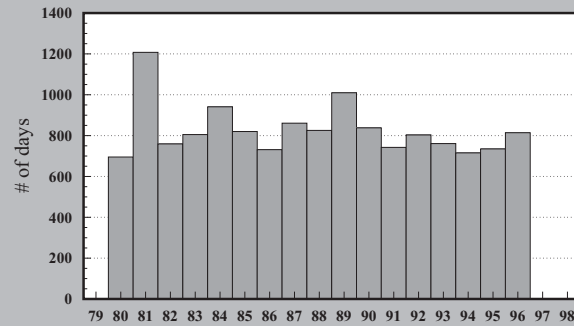
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-20c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Port Saunders, 1980 - 1997. (missing data may not allow estimation for some years)

Table 2A-20a. Monthly maximum temperature (°C) for Robert's Arm.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1982	-	-	-	-	-	-	-	-	-	-	16.5	10.5
1983	13.0	6.5	12.0	21.0	22.0	27.0	35.5	29.5	28.0	21.5	14.5	8.0
1984	6.0	8.5	11.5	12.0	24.5	24.5	30.5	31.0	25.5	14.5	18.0	12.0
1985	4.0	8.0	6.0	13.5	22.0	29.5	32.0	29.5	24.0	17.0	11.5	10.0
1986	12.5	8.0	11.0	22.0	27.0	28.5	28.0	28.0	23.0	19.0	10.0	5.5
1987	4.0	3.0	11.0	18.5	22.5	25.0	31.5	28.0	26.0	23.0	16.0	7.5
1988	5.0	9.0	14.5	11.5	27.0	33.5	30.5	31.5	25.0	20.5	14.5	4.5
1989	6.5	8.0	11.5	13.5	24.5	29.0	30.5	30.0	27.0	18.0	20.0	3.0
1990	10.0	5.0	13.0	13.5	25.5	31.0	29.5	31.0	24.5	22.5	13.5	10.5
1991	0.5	10.0	10.0	13.0	22.5	26.0	31.0	29.5	24.0	19.0	17.5	7.0
1992	8.5	4.0	14.0	14.5	28.0	24.0	28.5	28.0	26.0	18.5	14.5	8.0
1993	4.0	9.5	12.0	15.5	23.0	31.0	27.5	30.5	23.5	19.0	15.0	12.0
1994	8.0	4.5	9.0	14.0	19.0	28.5	27.0	26.5	21.5	22.0	15.5	5.5
1995	9.0	8.5	9.0	12.5	22.5	24.5	30.5	33.0	24.5	19.5	14.0	4.5
1996	9.0	-	-	-	-	-	-	-	-	-	-	-

Table 2A-20b. Number of days of winter rainfall total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Robert's Arm.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1982	-	-	1	-	-	-	-
1983	28	254.2	4	19	45	13	0
1984	19	291.4	2	40	38	46	9
1985	13	241.1	21	35	48	24	3
1986	24	221.5	31	7	31	25	0
1987	25	220.5	60	106	144	120	0
1988	20	399.3	54	88	92	61	30
1989	9	263.9	55	106	110	93	0
1990	11	299.6	8	41	91	74	4
1991	14	254.8	35	85	115	84	20
1992	13	297.1	35	33	104	62	0
1993	16	327.8	-	80	96	96	0
1994	13	303.2	-	-	-	-	0
1995	12	349.0	-	-	-	-	-
1996	17	-	-	-	-	-	-

Table 2A-20c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Robert's Arm.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1983	115	1152.3	126
1984	83	1024.0	96
1985	123	1053.9	111
1986	97	960.1	114
1987	104	1164.0	137
1988	107	1128.3	118
1989	95	1357.8	134
1990	111	1200.1	120
1991	124	922.8	121
1992	78	1005.8	131
1993	105	852.6	105
1994	136	1181.9	130
1995	140	1161.1	133

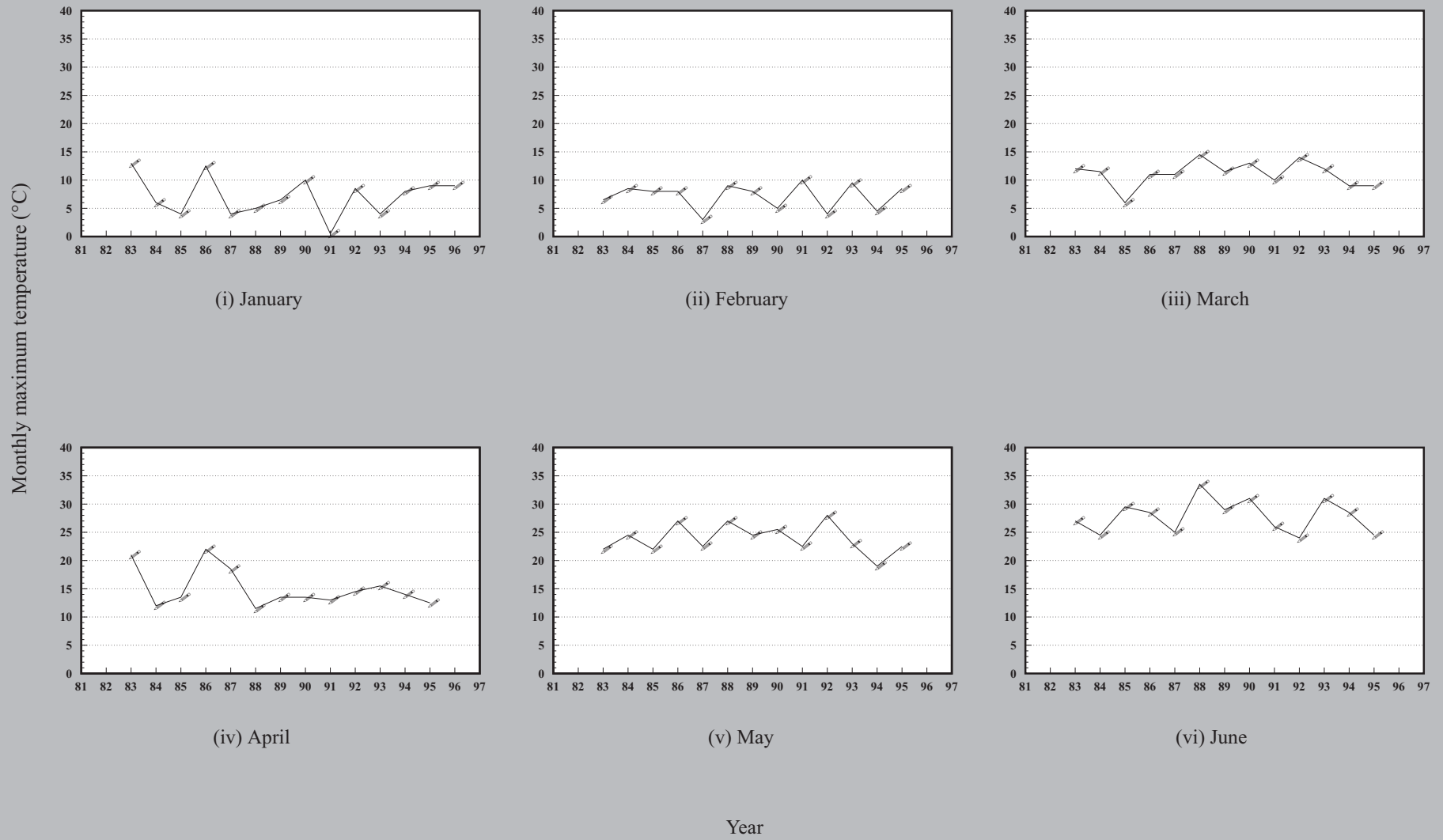


Fig. 2A-21a. Monthly maximum temperature (°C) for Robert's Arm, 1982 - 1996. (missing data may not allow estimation for some years)

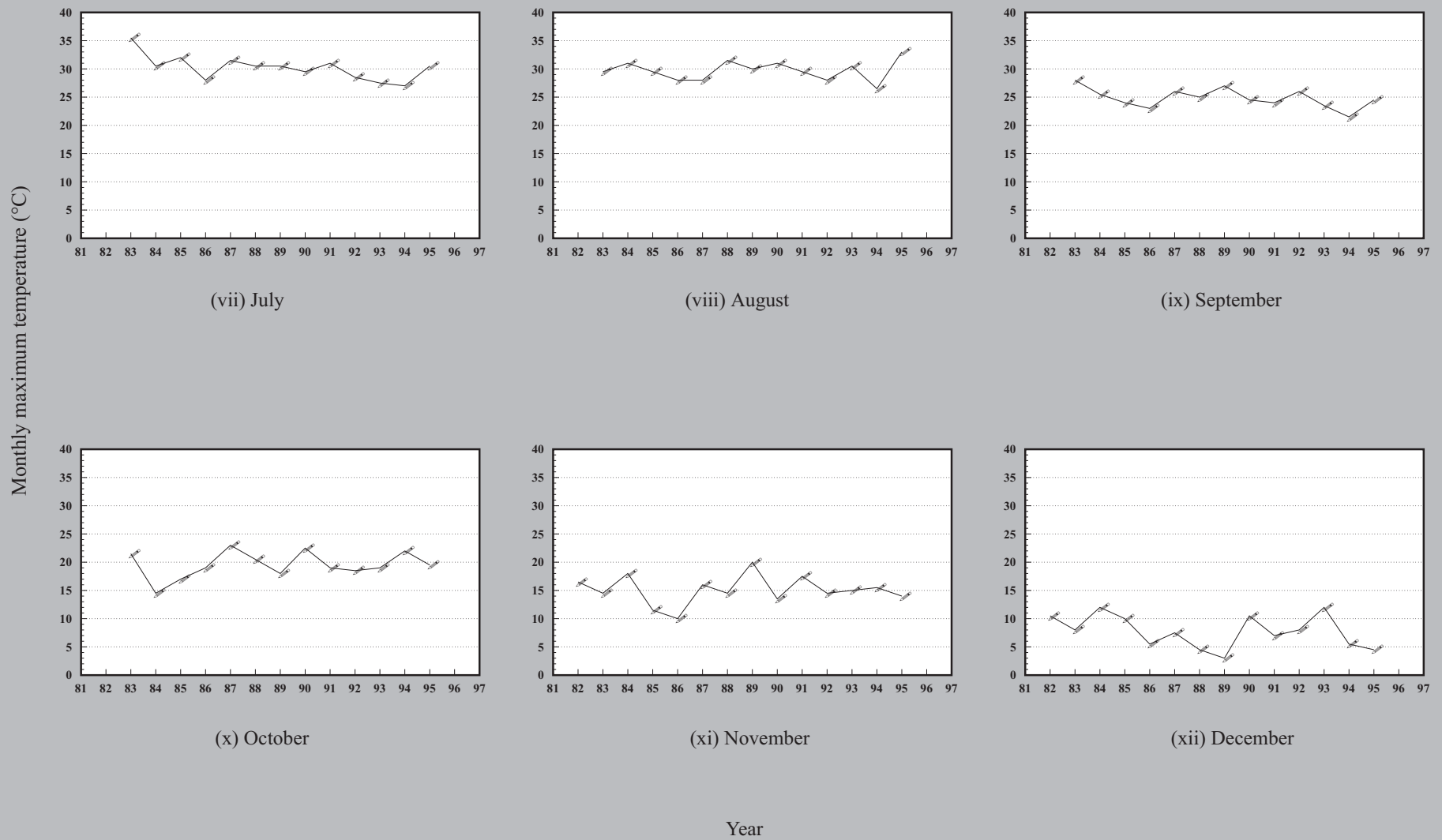


Fig. 2A-21a (con'd). Monthly maximum temperature (°C) for Robert's Arm, 1982 - 1996. (missing data may not allow estimation for some years)

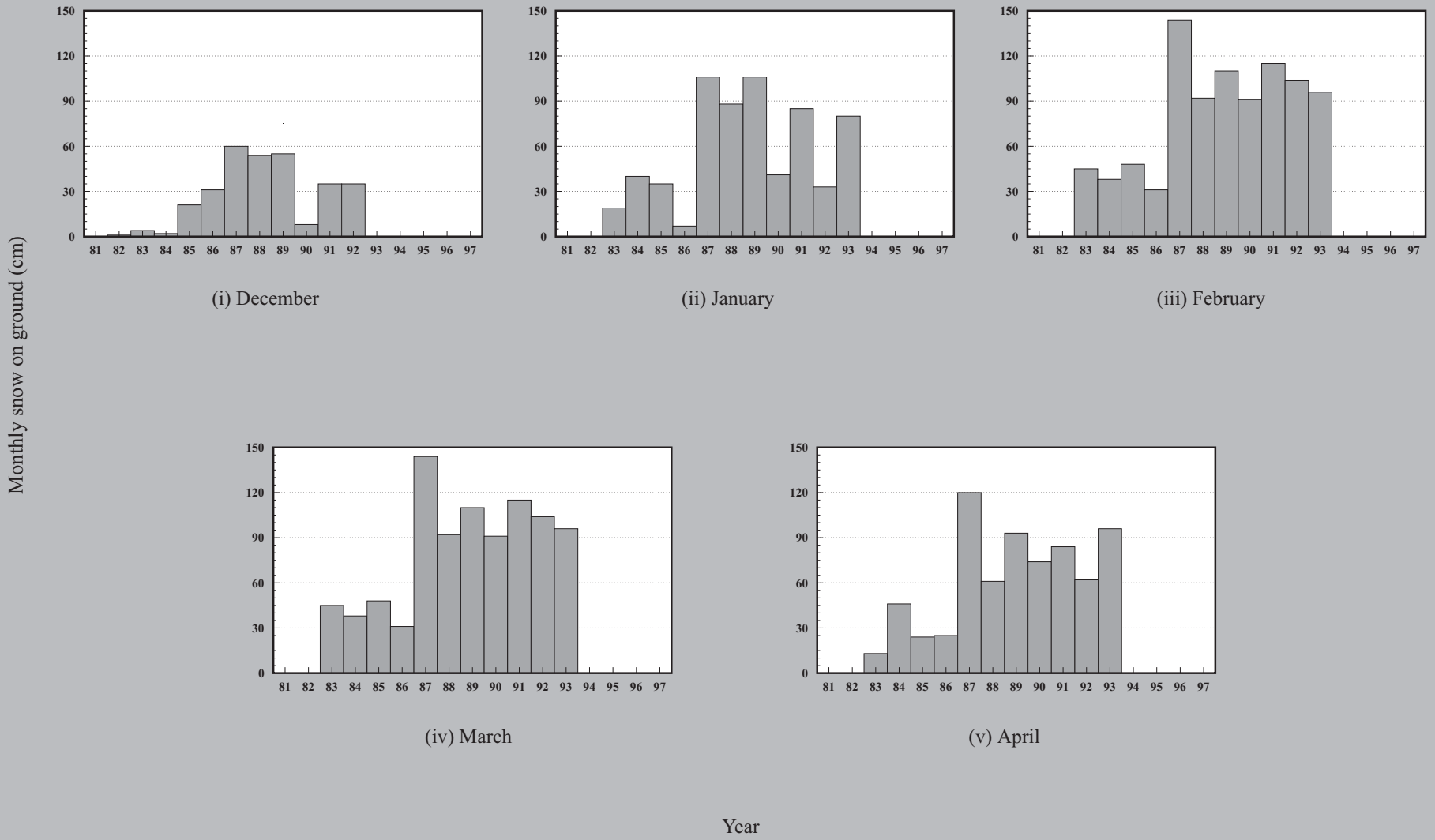
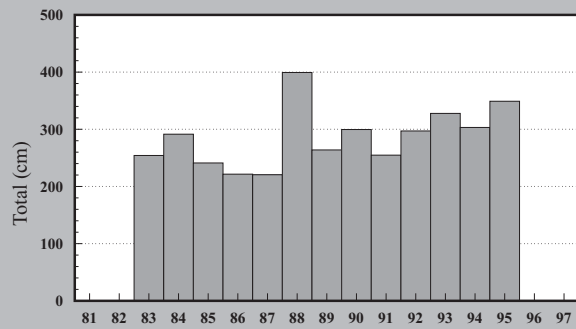
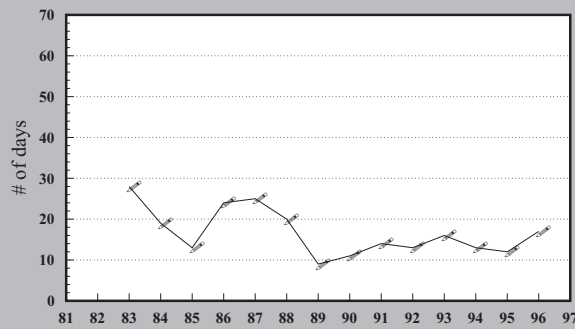


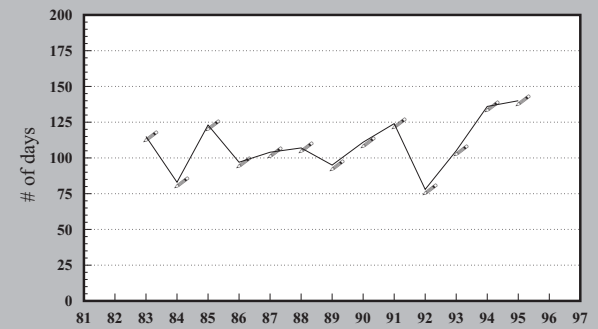
Fig. 2A-21b. Snow depth (cm) on ground on the last day of the month for Robert's Arm, 1982 - 1996. (missing data may not allow estimation for some years)



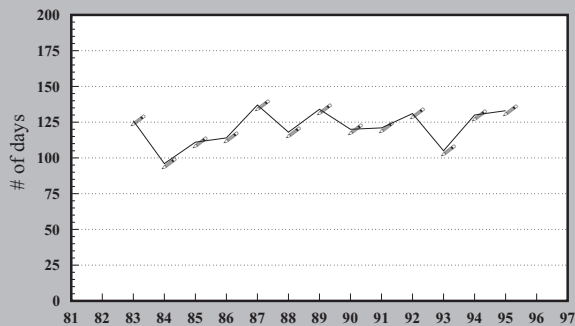
c. Snowfall



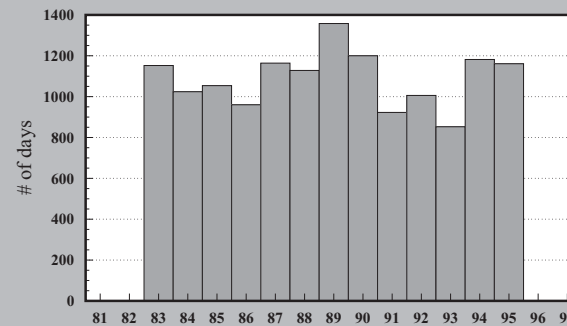
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-21c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Robert's Arm, 1982 - 1996. (missing data may not allow estimation for some years)

Table 2A-21a. Monthly maximum temperature (°C) for Rocky Harbour.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1972	-	-	-	-	-	-	26.7	23.3	22.2	18.3	11.7	15.6
1973	8.9	7.8	11.1	12.2	20.6	22.2	27.8	22.8	23.3	15.0	14.4	16.7
1974	5.6	7.2	9.4	10.6	12.8	23.9	26.1	25.0	21.7	16.7	12.8	10.6
1975	5.6	5.0	11.1	15.6	16.1	22.8	26.7	23.9	26.1	18.3	16.7	11.7
1976	13.9	13.3	17.2	16.7	22.2	22.2	23.9	27.8	22.8	20.6	12.2	8.9
1977	9.4	7.2	8.3	12.8	18.9	25.6	23.9	26.7	20.6	18.3	18.3	10.6
1978	10.0	6.7	10.0	11.7	17.8	26.1	23.9	26.7	17.5	17.0	13.0	9.5
1979	15.5	7.5	14.0	20.0	25.0	26.0	25.5	26.5	25.5	20.0	18.0	11.0
1980	6.0	2.0	9.0	16.5	18.5	27.0	29.5	22.0	22.0	19.5	12.5	7.5
1981	9.5	14.0	11.5	12.5	20.5	24.0	26.0	26.0	23.5	21.5	15.0	15.5
1982	4.5	5.0	13.5	16.0	21.0	20.5	28.5	27.5	23.0	16.0	-	10.5
1983	11.5	7.5	14.0	20.0	19.5	24.5	28.5	27.0	28.0	20.0	15.0	-
1984	6.0	9.5	14.0	14.5	26.0	21.5	29.5	28.5	21.5	14.0	15.0	12.5
1985	4.5	6.5	8.0	11.5	20.0	26.0	28.5	24.5	22.0	15.0	10.0	11.5
1986	12.0	7.0	10.0	22.0	19.5	24.0	26.0	24.0	-	16.5	6.5	5.0
1987	3.5	3.0	12.5	18.0	21.0	21.0	26.5	23.0	24.0	21.5	15.0	9.0
1988	5.0	8.0	14.0	14.0	19.5	26.0	24.0	26.5	22.0	20.0	13.0	5.5
1989	7.5	10.5	11.5	15.5	20.5	24.0	28.0	27.0	27.0	18.0	17.0	3.0
1990	15.0	2.0	8.0	13.0	18.5	25.0	24.0	26.5	23.0	19.5	13.0	13.0
1991	-0.5	7.0	10.5	10.5	20.0	24.5	25.0	27.5	23.0	18.0	15.5	7.0
1992	8.0	2.5	14.0	15.0	24.0	24.5	25.5	24.0	24.5	17.0	11.0	7.0
1993	6.3	7.8	12.5	17.7	22.6	24.1	26.4	27.9	22.9	19.0	13.2	11.8
1994	8.5	4.8	11.7	15.2	-	23.1	27.7	29.2	21.3	19.6	15.5	5.9
1995	7.6	7.5	10.1	18.7	22.8	23.9	30.1	30.5	23.7	21.8	16.6	10.6
1996	13.9	14.6	11.8	22.1	20.2	24.5	26.7	31.6	26.9	21.2	18.4	15.3
1997	7.9	1.9	8.5	14.9	18.1	25.7	30.4	-	-	-	-	-

Table 2A-21b. Total annual snowfall (cm), number of days of winter rainfall and snow depth (cm) on ground on the last day of the month for Rocky Harbour.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1972	-	-	38	-	-	-	-
1973	12	310.0	5	25	61	41	-
1974	22	312.0	25	15	25	53	-
1975	13	290.2	-	48	66	79	0
1976	19	276.8	0	-	0	0	0
1977	21	428.5	0	81	-	0	0
1978	14	589.3	0	0	0	0	0
1979	25	454.6	7	0	0	0	0
1980	16	410.0	0	0	68	10	0
1981	33	299.9	-	0	0	-	0
1982	25	529.3	0	-	63	27	-
1983	18	232.0	-	-	-	-	0
1984	15	374.7	24	46	12	10	0
1985	6	393.7	47	100	100	87	75
1986	25	333.3	-	35	99	74	0
1987	23	287.6	56	69	92	35	0
1988	21	328.4	41	72	95	60	0
1989	20	387.6	-	91	107	96	31
1990	18	327.5	30	-	-	-	-
1991	17	382.9	75	72	104	5	-
1992	12	453.5	-	61	109	85	-
1993	11	397.0	-	50	55	29	0
1994	-	-	23	15	24	10	0
1995	-	-	16	62	54	33	1
1996	-	-	-	12	11	5	0
1997	-	-	-	-	53	57	37

Table 2A-21c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Rocky Harbour.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1972	-	907.8	116
1973	140	1123.0	126
1974	118	928.9	120
1975	121	1113.6	120
1976	122	1010.8	110
1977	130	997.3	112
1978	88	949.5	123
1979	99	1250.9	158
1980	129	874.8	120
1981	120	966.0	118
1982	113	896.0	123
1983	135	1185.6	137
1984	135	1071.4	116
1985	156	1011.1	121
1986	104	921.8	112
1987	134	1157.3	141
1988	130	1016.8	114
1989	125	1263.3	137
1990	137	1236.8	147
1991	148	885.9	122
1992	122	939.3	122
1993	-	1053.2	146
1994	-	1144.6	130
1995	-	1127.3	134
1996	-	1101.7	119

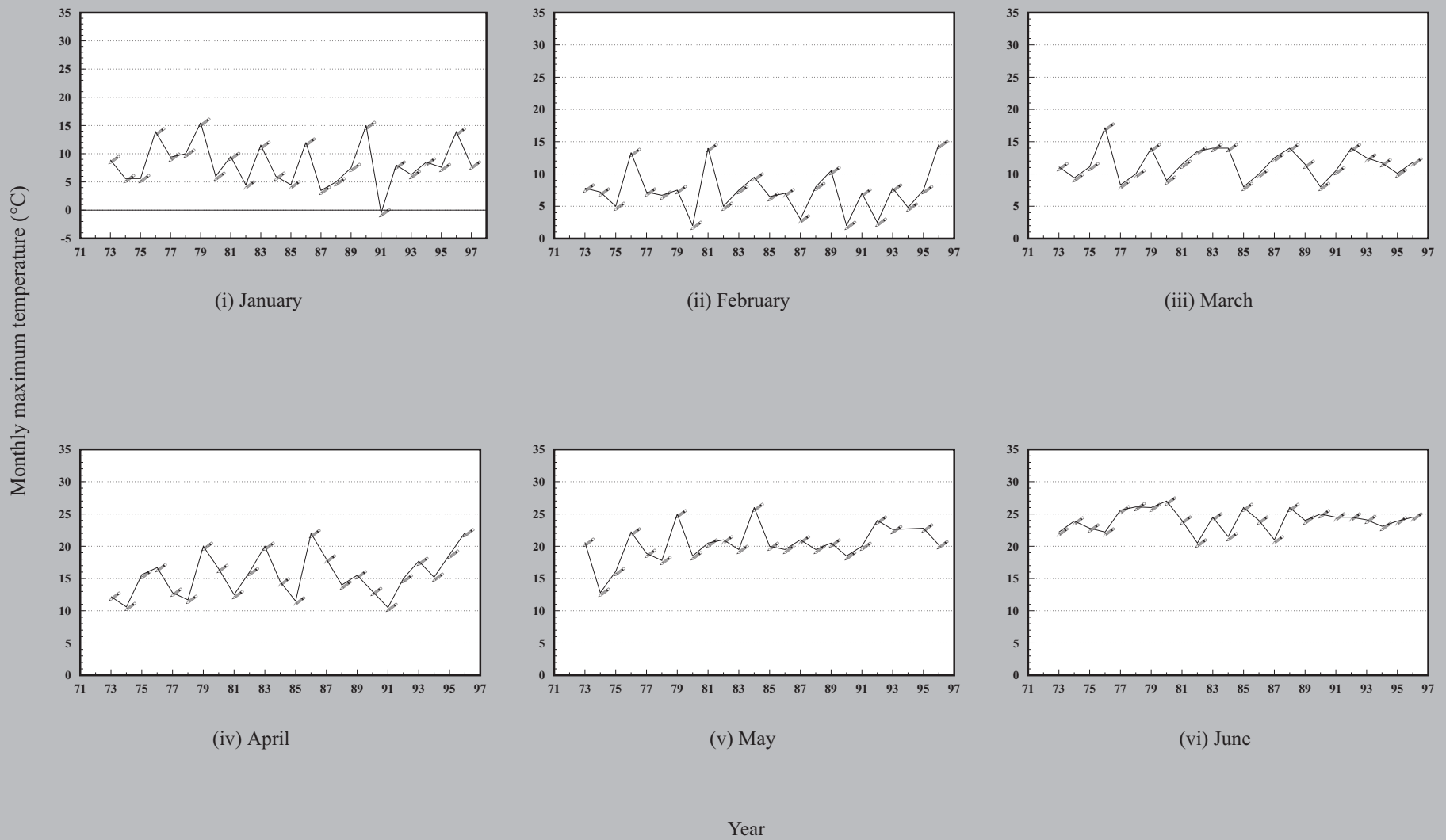


Fig. 2A-22a. Monthly maximum temperature (°C) for Rocky Harbour, 1972 - 1997. (missing data may not allow estimation for some years)

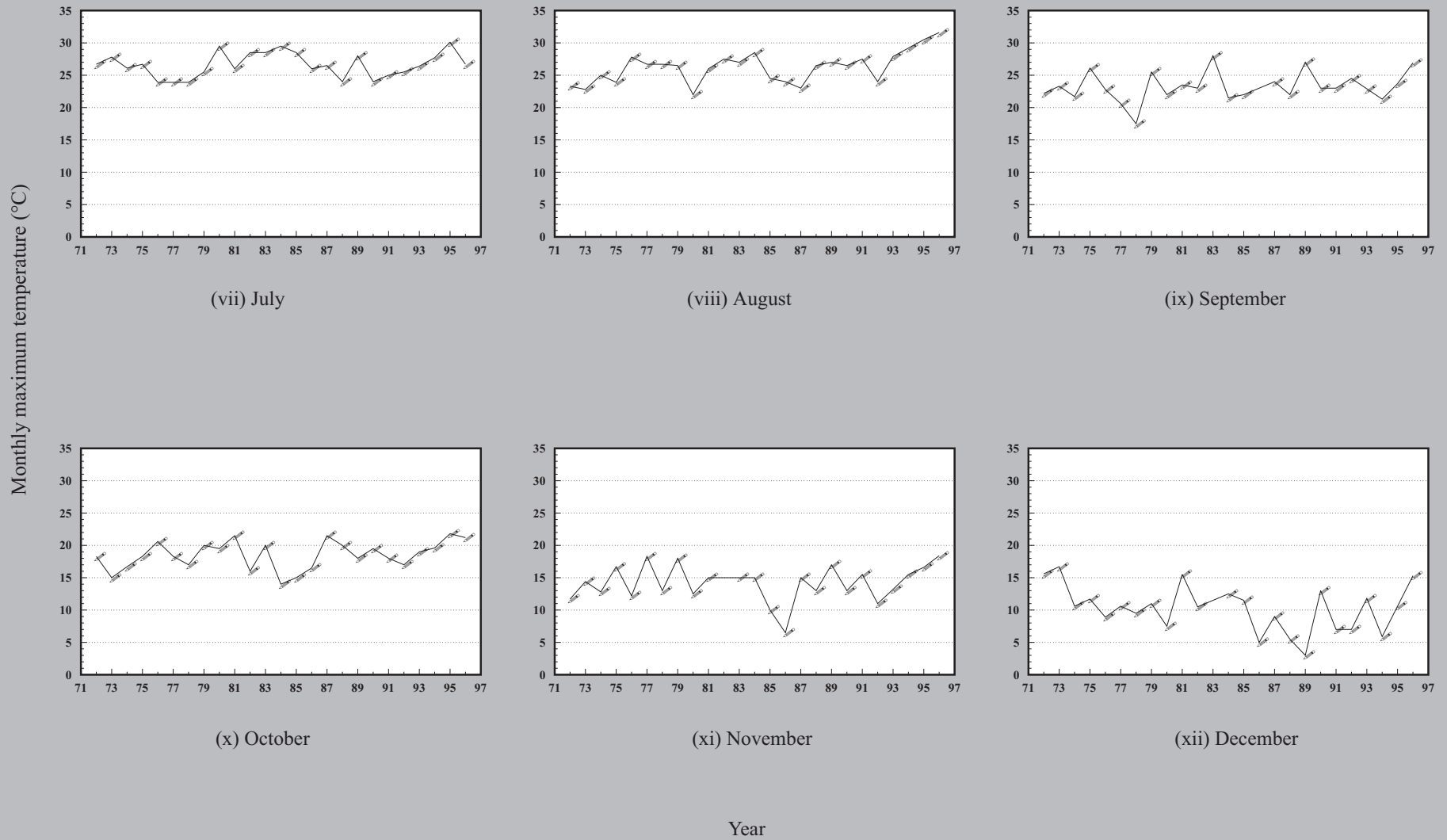


Fig. 2A-22a (con'd). Monthly maximum temperature (°C) for Rocky Harbour, 1972 - 1997. (missing data may not allow estimation for some years)

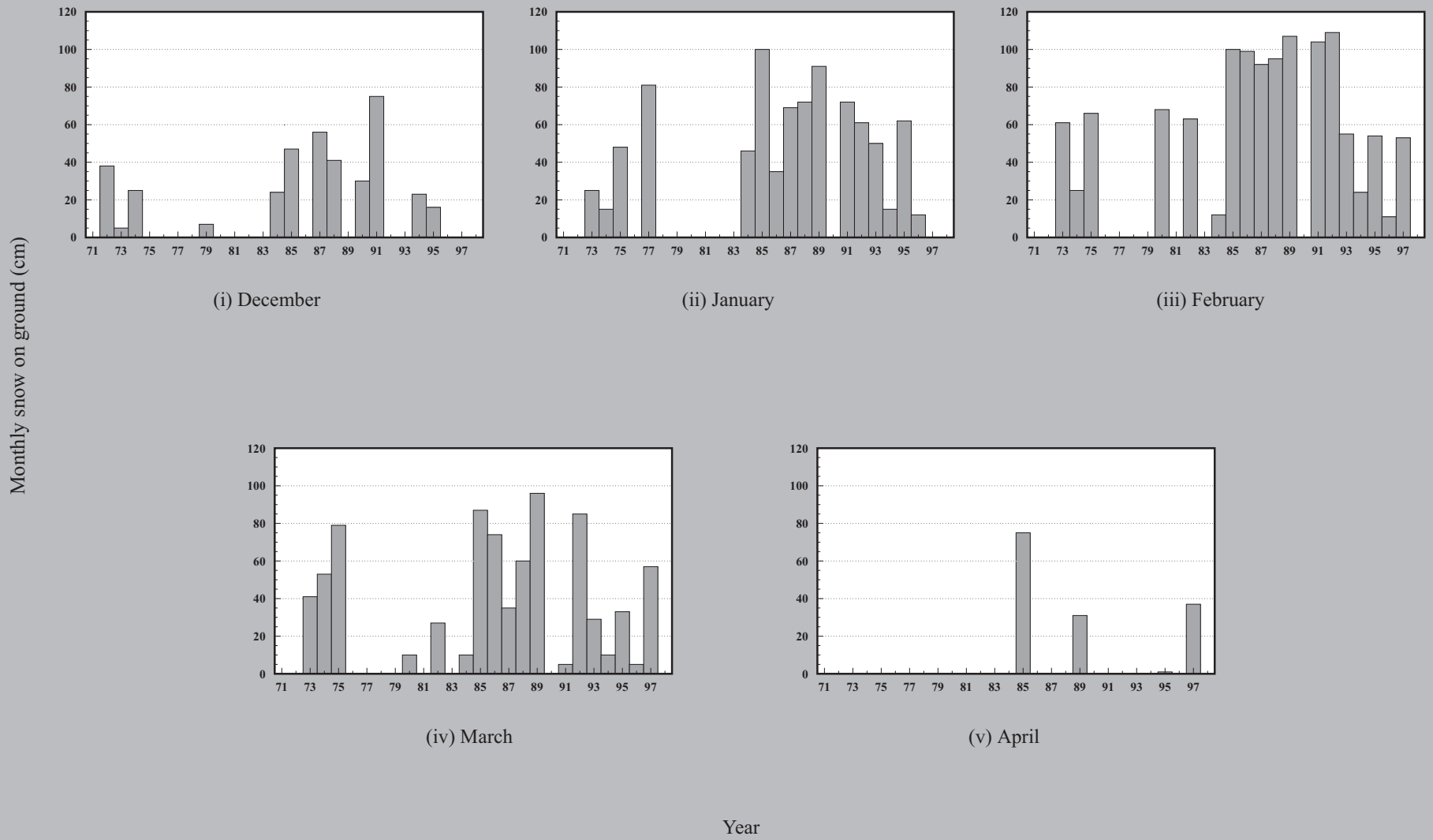
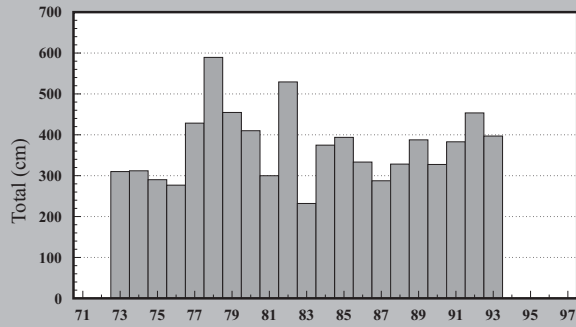
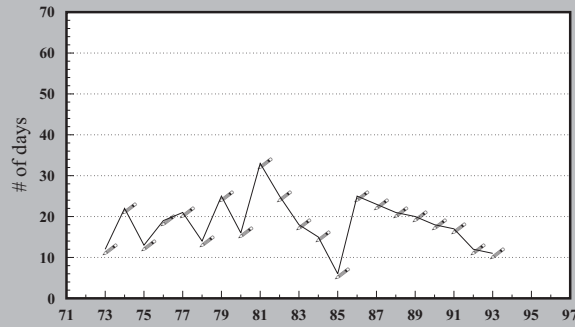


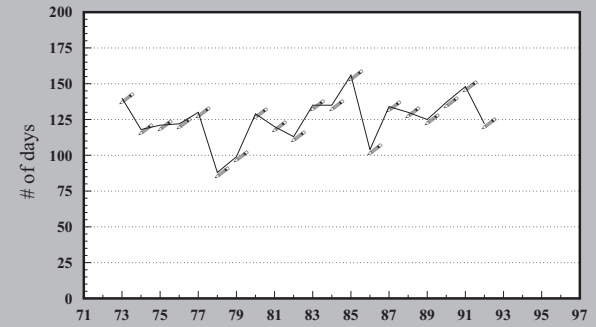
Fig. 2A-22b. Snow depth (cm) on ground on the last day of the month for Rocky Harbour, 1972 - 1997. (missing data may not allow estimation for some years)



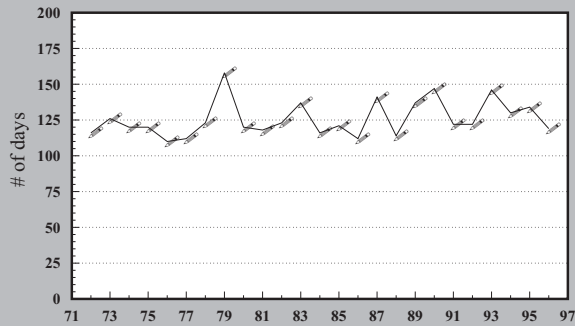
c. Snowfall



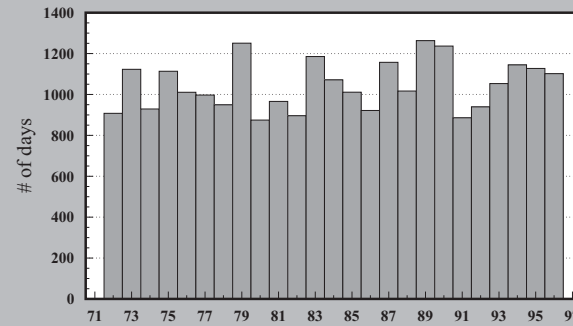
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-22c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Rocky Harbour, 1972 - 1997. (missing data may not allow estimation for some years)

Table 2A-22a. Monthly maximum temperature (°C) for St. Anthony.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	5.0	1.7	2.8	9.4	18.9	22.8	27.2	-	20.0	15.0	14.4	7.8
1951	4.4	-	5.0	9.4	14.4	21.1	27.0	23.9	20.0	-	-	-
1952	-	2.8	1.7	7.2	17.8	22.2	31.1	25.6	18.9	17.8	8.3	3.9
1953	4.4	3.9	6.7	9.4	14.4	20.0	25.0	25.6	20.6	14.4	12.2	5.6
1954	2.2	8.9	4.4	6.7	14.4	27.8	22.8	21.1	19.4	14.4	10.0	4.4
1955	3.3	3.9	3.9	7.8	16.1	27.8	27.2	25.6	23.3	14.4	6.1	2.2
1956	6.1	2.2	4.4	8.3	10.6	21.1	23.9	23.3	-	-	11.7	4.4
1957	-0.6	0.6	1.7	4.4	12.2	20.0	24.4	22.8	18.3	16.1	8.3	7.8
1958	2.8	2.8	3.3	10.0	16.7	21.7	26.1	24.4	20.6	14.4	8.3	1.7
1959	2.2	3.9	2.2	10.0	16.7	16.7	28.3	23.9	26.1	12.2	16.1	3.9
1960	3.3	2.2	1.7	7.2	18.3	24.4	25.6	28.3	21.1	11.7	10.0	3.3
1961	-0.6	-3.3	3.3	5.6	16.7	23.9	27.8	25.0	20.6	15.0	10.0	3.3
1962	3.3	5.0	7.8	6.7	16.7	28.3	22.8	24.4	18.3	15.0	11.1	5.0
1963	4.4	1.7	5.0	10.6	22.8	21.1	30.0	20.0	20.0	16.7	9.4	9.4
1964	3.3	3.3	5.0	8.3	13.9	20.6	26.7	22.2	19.4	12.8	5.0	6.7
1965	2.2	2.2	3.3	7.8	15.6	22.8	22.8	23.9	23.3	12.2	7.8	3.3
1966	2.8	1.7	-	-	-	-	-	23.3	19.4	11.1	14.4	10.6
1967	2.2	2.2	3.9	5.0	12.2	25.6	26.1	25.0	20.0	18.9	15.0	6.7
1968	3.3	3.3	5.6	10.6	13.3	20.0	25.0	23.9	21.1	21.1	5.0	2.8
1969	4.4	4.4	5.0	6.1	14.4	22.2	27.2	23.3	18.9	15.6	15.0	10.0
1970	0.6	10.0	3.3	7.2	15.0	26.7	26.1	27.2	21.7	-	9.4	2.8
1971	2.8	3.3	2.2	6.7	22.8	21.7	25.0	26.7	18.3	13.3	6.7	1.1
1972	2.8	2.2	3.9	3.3	14.4	22.8	26.1	22.8	21.1	16.7	6.1	4.4
1973	1.1	2.8	4.4	5.0	16.1	22.8	26.7	22.8	18.3	13.9	8.9	8.3
1974	1.7	2.2	2.8	4.4	6.7	23.9	25.6	24.4	18.3	11.7	6.1	5.6
1975	-	-	6.1	6.7	13.9	21.7	27.8	23.3	18.9	12.8	9.4	5.0
1976	3.9	4.4	9.4	6.7	16.1	24.4	23.9	28.3	18.3	20.0	3.3	2.8
1977	2.7	2.8	4.6	4.7	13.3	22.9	24.1	25.0	18.1	12.3	13.2	5.2
1978	3.6	1.3	1.7	5.3	18.2	22.5	23.8	26.3	16.0	14.1	7.8	2.3
1979	5.2	3.3	9.3	14.1	22.3	25.0	25.5	25.3	16.3	15.2	9.0	4.6

Table 2A-22a (con'd). Monthly maximum temperature (°C) for St. Anthony.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1980	1.4	0.6	5.9	7.9	14.7	23.1	24.2	18.9	21.2	10.3	7.2	2.7
1981	2.4	6.7	2.6	4.7	17.5	22.1	28.2	24.3	22.7	12.7	10.7	5.1
1982	1.4	-0.3	5.3	7.9	13.8	18.7	24.7	27.1	24.0	15.5	10.7	5.3
1983	6.0	4.2	6.0	11.4	17.7	23.0	27.4	25.4	24.3	15.1	10.4	2.8
1984	1.0	4.0	5.8	4.0	17.6	19.2	25.6	25.3	22.6	11.7	8.4	4.8
1985	1.3	1.7	2.2	3.0	10.2	24.8	24.3	26.3	18.0	11.6	6.0	11.6
1986	5.4	2.0	4.6	12.2	20.8	20.5	24.6	25.6	17.8	11.5	3.5	1.4
1987	-	1.3	6.1	8.0	15.8	22.0	25.5	21.7	20.3	13.4	5.9	4.8
1988	3.2	2.2	3.6	4.2	17.2	24.0	25.1	23.2	20.0	12.5	7.5	1.3
1989	2.1	0.6	5.3	7.2	15.0	27.4	23.8	25.4	21.5	11.0	10.0	1.2
1990	3.2	-3.0	2.2	4.8	17.0	24.5	23.5	28.3	18.4	14.1	3.5	2.0
1991	-3.0	3.9	2.1	7.0	14.3	20.0	25.2	24.8	18.0	13.0	12.6	4.0
1992	3.5	-0.6	5.0	8.5	22.0	19.5	24.4	23.5	20.0	11.0	8.0	2.0
1993	1.0	4.1	7.2	9.0	15.5	21.5	22.7	24.3	17.7	13.6	9.0	4.5
1994	4.0	-2.0	1.5	6.0	11.0	20.5	24.8	26.0	21.0	17.0	7.7	1.5
1995	-0.8	3.0	2.5	5.2	-	20.4	-	30.0	21.0	16.0	9.0	2.5
1996	6.0	-	-	10.0	-	-	-	-	-	-	-	-
Normal	-6.9	-7.1	-3.2	1.0	6.4	12.3	17.3	16.5	12.0	-	1.2	-3.8

Table 2A-22b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for St. Anthony.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	11	-	-	-	-	-	-
1951	26	242.1	-	-	-	-	-
1952	18	415.9	-	-	-	-	-
1953	19	260.6	-	-	71	-	-
1954	5	239.2	-	-	-	-	-
1955	13	209.6	46	36	53	15	-
1956	11	132.1	13	5	36	74	-
1957	3	182.9	3	99	150	137	30
1958	23	106.8	58	5	33	-	-
1959	10	265.4	56	160	193	229	15
1960	15	308.3	30	119	104	170	5
1961	7	248.1	5	137	175	130	3
1962	20	250.8	61	71	165	25	25
1963	15	342.1	89	13	127	119	5
1964	15	410.2	-	180	-	-	-
1965	14	374.1	48	51	61	43	28
1966	14	296.5	20	41	86	-	-
1967	4	213.9	13	51	102	124	41
1968	14	198.0	71	58	46	81	5
1969	18	330.4	-	99	43	41	18
1970	13	313.3	71	53	30	33	15
1971	21	401.3	99	130	180	229	25
1972	12	338.6	69	76	132	43	61
1973	13	406.0	18	112	193	150	41
1974	16	385.0	43	43	66	140	102
1975	16	268.2	33	84	81	51	10
1976	17	349.0	28	64	99	46	10
1977	18	341.3	10	99	124	62	13
1978	11	396.5	24	56	85	128	21
1979	24	379.6	40	7	46	2	-
1980	8	389.0	50	120	134	116	30
1981	28	355.6	50	73	11	24	2
1982	14	626.2	26	124	180	159	95
1983	24	288.2	43	30	26	20	-
1984	18	481.2	49	58	103	108	70
1985	10	490.7	26	91	105	90	102
1986	25	472.8	63	70	78	75	6
1987	20	451.3	87	164	231	170	61
1988	18	471.3	37	99	64	44	23

Table 2A-22b (con'd). Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for St. Anthony.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1989	11	413.7	70	55	75	56	25
1990	13	363.9	59	88	96	79	55
1991	10	452.3	52	69	87	62	43
1992	15	438.3	70	49	95	48	30
1993	13	434.2	75	72	99	85	5
1994	18	474.5	45	54	77	53	18
1995	18	610.4	6	146	162	238	80
1996	-	-	-	24	-	-	-
Normal	17	-	47	82	105	90	38

Table 2A-22c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for St. Anthony.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	111	-	116
1951	112	805.1	-
1952	135	863.9	105
1953	137	741.9	113
1954	143	729.9	112
1955	135	725.0	116
1956	90	-	-
1957	122	609.3	94
1958	115	640.6	93
1959	112	676.7	86
1960	142	852.8	119
1961	152	825.1	121
1962	105	556.9	98
1963	110	523.6	83
1964	126	542.8	97
1965	120	724.0	107
1966	-	-	-
1967	103	809.6	88
1968	104	557.4	87
1969	105	652.3	81
1970	103	676.4	89
1971	112	648.8	87
1972	100	527.9	86
1973	107	654.1	91
1974	95	531.3	92

Table 2A-22c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for St. Anthony.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1975	116	760.8	103
1976	111	630.1	93
1977	132	575.6	80
1978	113	491.2	70
1979	119	563.0	89
1980	114	455.5	84
1981	122	616.7	98
1982	108	540.2	73
1983	115	633.9	104
1984	85	637.4	80
1985	91	615.6	94
1986	103	579.0	97
1987	133	559.2	95
1988	102	538.7	77
1989	98	695.0	95
1990	107	574.1	82
1991	98	417.7	82
1992	105	350.5	66
1993	108	479.3	88
1994	115	710.2	104
1995	89	-	90

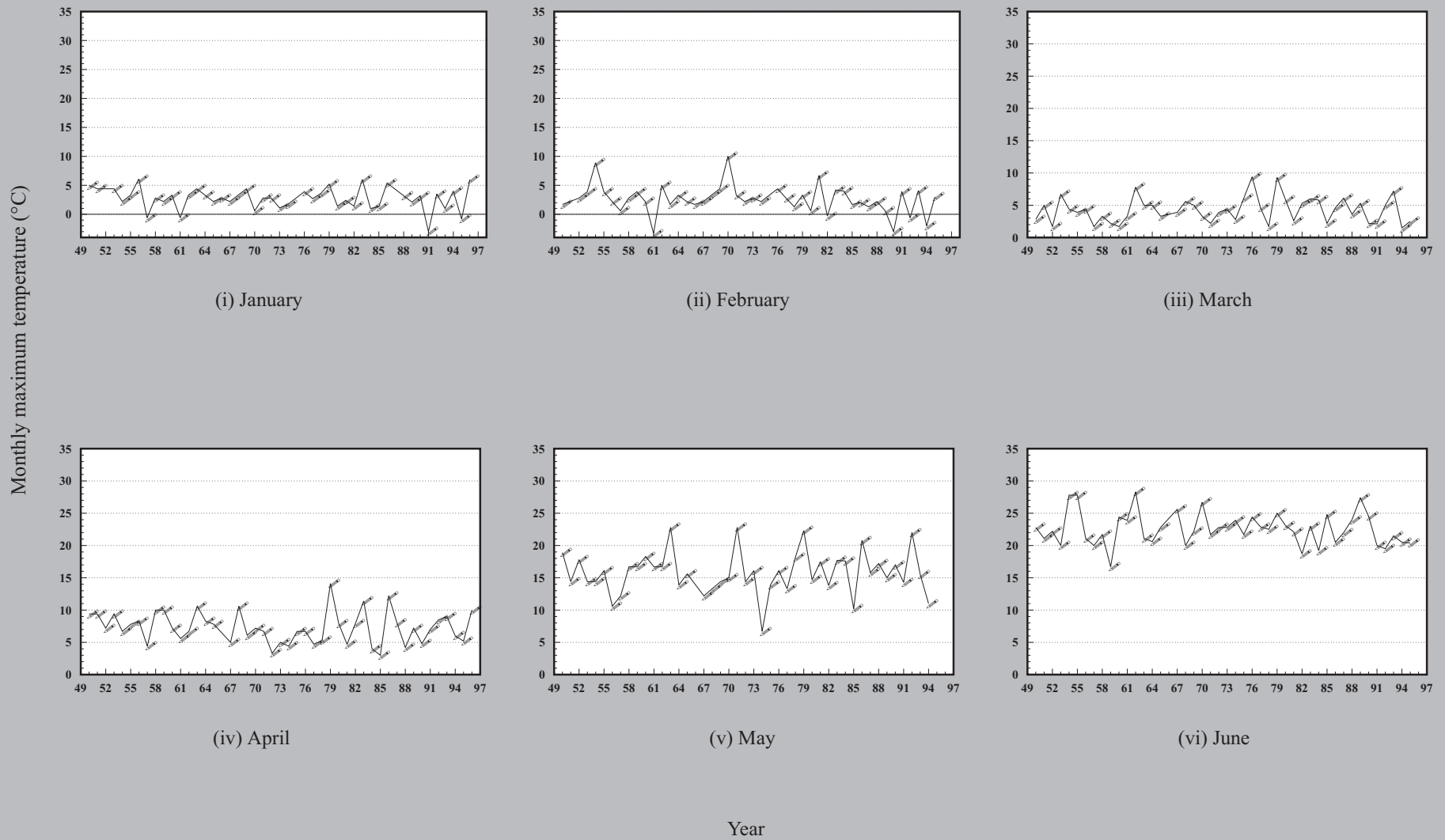


Fig. 2A-23a. Monthly maximum temperature (°C) for St. Anthony, 1950 - 1997. (missing data may not allow estimation for some years)

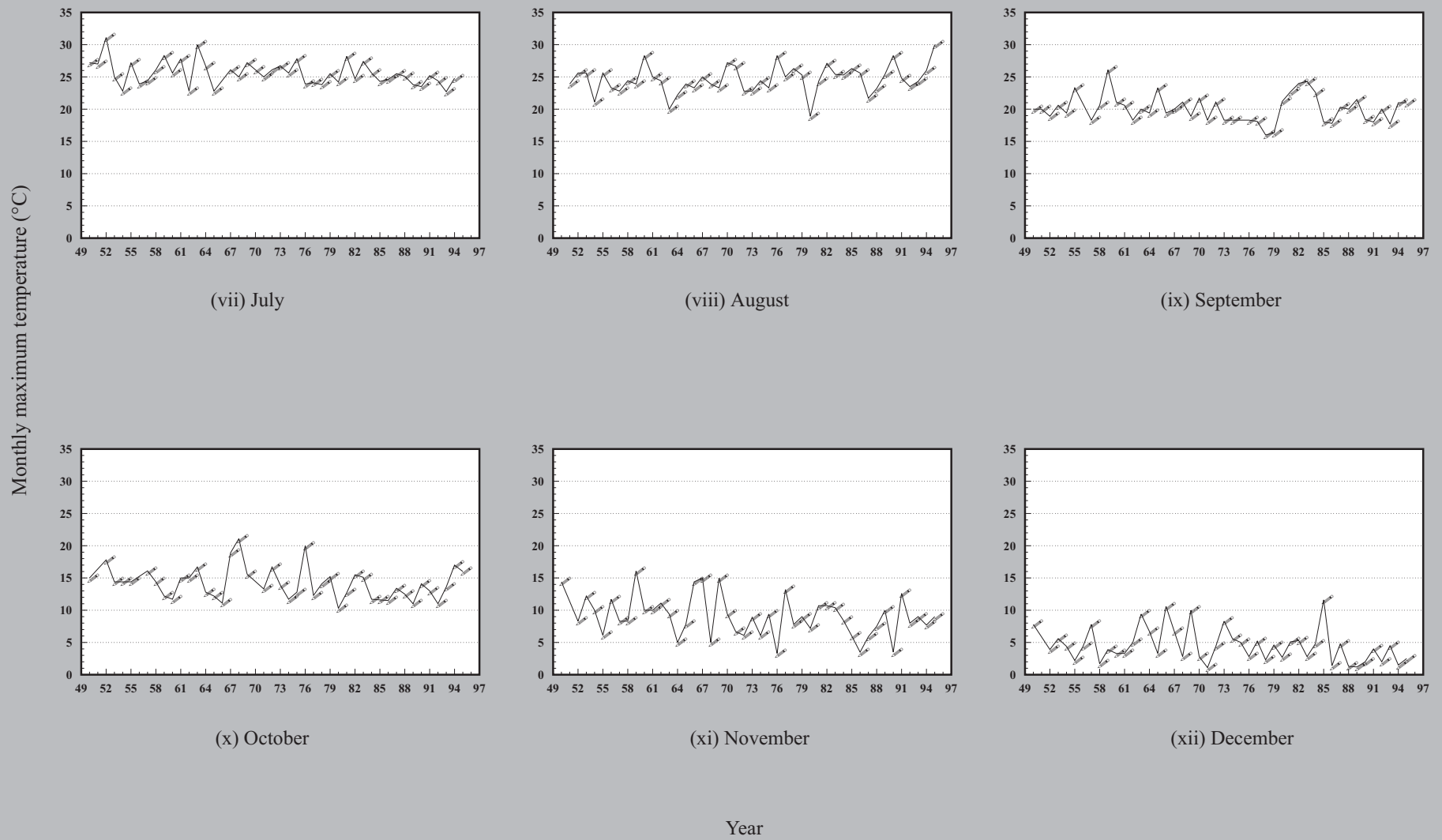


Fig. 2A-23a (con'd). Monthly maximum temperature (° C) for St. Anthony, 1950 - 1997. (missing data may not allow estimation for some years)

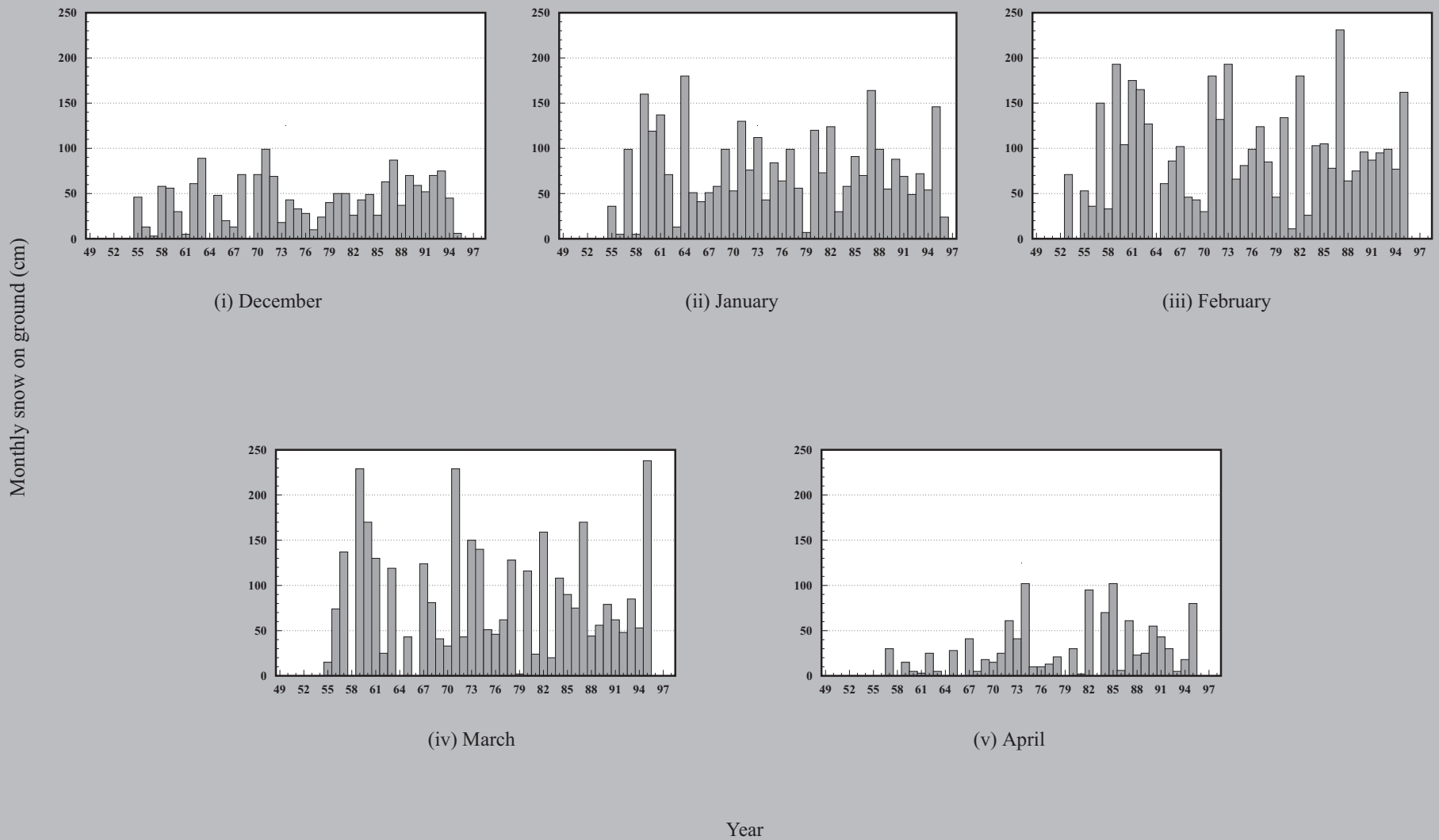
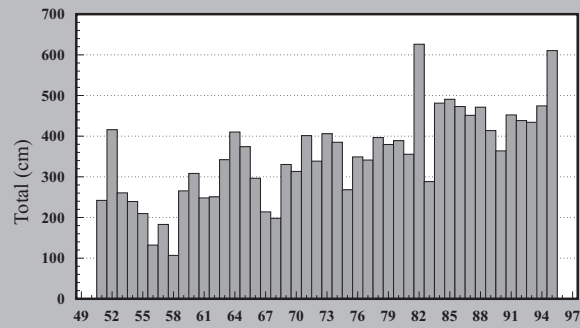
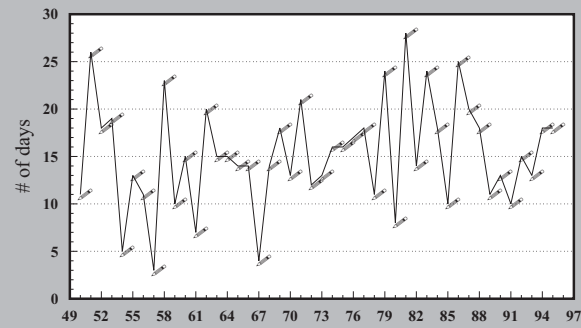


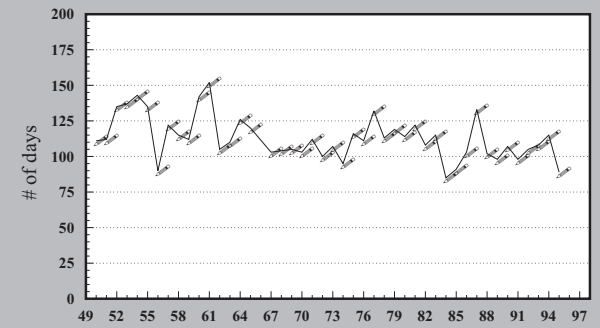
Fig. 2A-23b. Snow depth (cm) on ground on the last day of the month for St. Anthony, 1950 - 1997. (missing data may not allow estimation for some years)



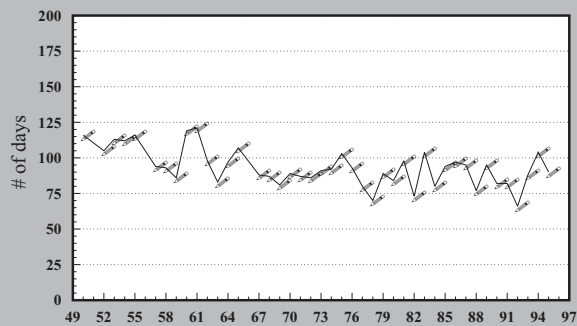
c. Snowfall



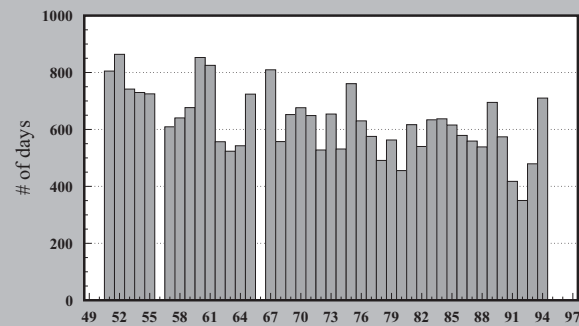
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-23c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for St. Anthony, 1950 - 1997. (missing data may not allow estimation for some years)

Table 2A-23a. Monthly maximum temperature (°C) for St. Bride's.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1988	-	-	-	-	-	20.0	19.5	21.0	17.0	19.5	16.5	9.0
1989	6.0	7.5	7.0	14.5	16.5	22.5	22.0	23.0	23.0	16.0	17.5	7.5
1990	10.5	7.0	9.5	12.5	13.5	19.0	22.0	22.0	19.0	18.5	16.0	10.5
1991	7.5	10.0	9.5	15.0	15.5	15.0	16.5	18.5	17.0	16.5	15.5	8.5
1992	7.5	5.0	6.5	6.5	12.0	15.0	14.0	18.5	21.0	14.5	8.0	7.0
1993	4.5	8.5	5.5	10.0	12.5	14.5	14.5	21.0	15.5	14.5	-	-
1994	7.5	2.5	6.5	10.0	13.0	18.0	19.0	20.0	17.0	14.0	10.0	6.0
1995	5.0	5.0	6.5	8.5	10.0	14.0	23.0	19.5	17.0	13.0	10.5	6.0
1996	5.0	4.5	8.5	7.0	10.0	16.5	21.0	23.5	18.0	15.5	15.0	8.5
1997	-	3.0	3.5	4.5	-	-	-	-	-	-	-	-

Table 2A-23b. Number of days of winter rainfall, total annual snowfall (cm) and for St. Bride's.

Year	Days of Winter Rainfall	Total Annual Snowfall
1989	23	134.2
1990	26	78.0
1991	26	83.1
1992	14	120.0
1993	22	73.0
1994	24	105.8
1995	15	103.2
1996	20	117.6
1997	13	87.7

Table 2A-23c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for St. Bride's.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1988	-	927.6	142
1989	165	1113.0	150
1990	155	1058.2	149
1991	156	800.5	143
1992	151	635.1	129
1993	184	718.3	150
1994	184	779.9	148
1995	182	852.3	147
1996	150	861.7	167

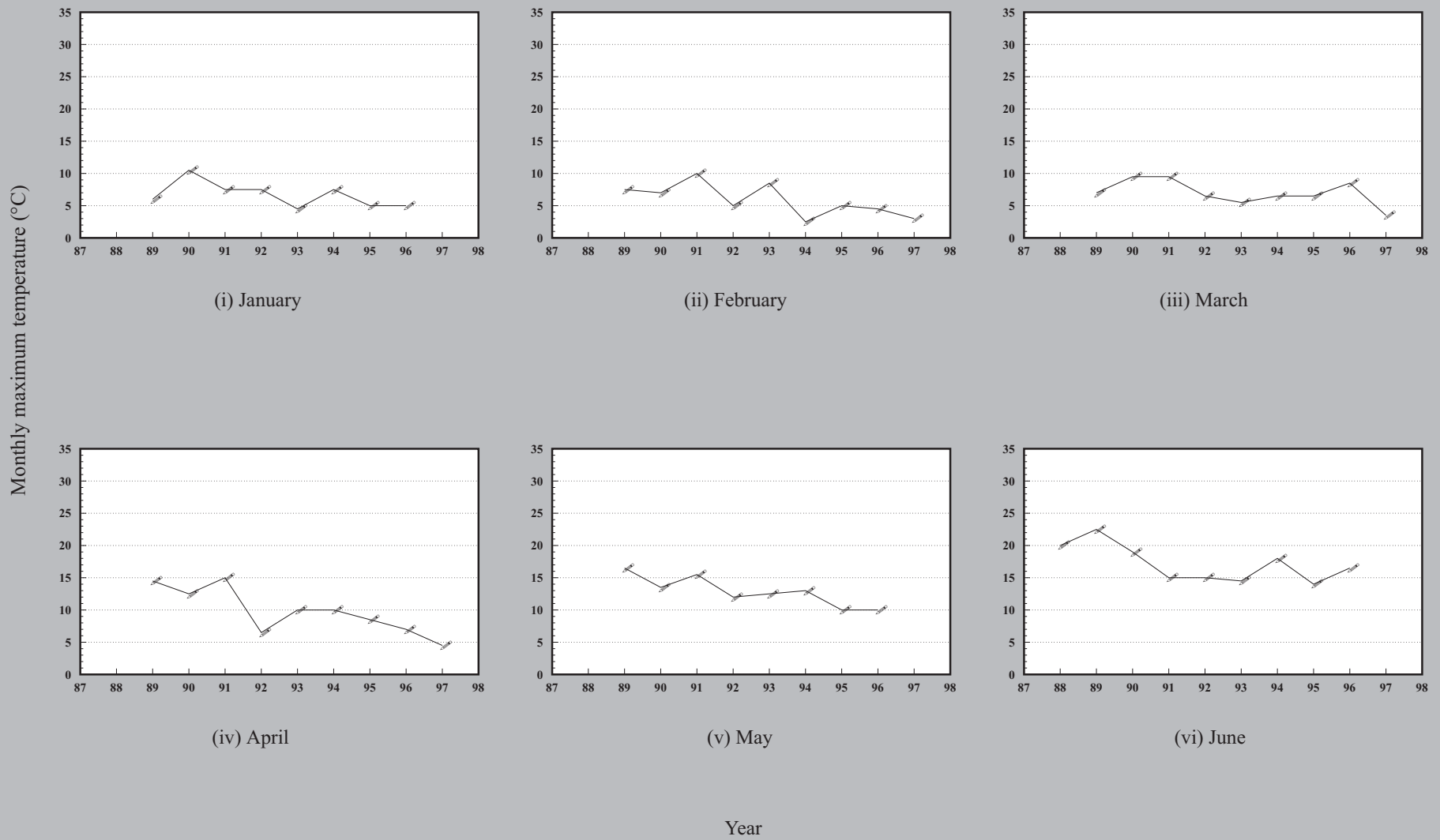


Fig. 2A-24a. Monthly maximum temperature (°C) for St. Bride's, 1988 - 1997. (missing data may not allow estimation for some years)

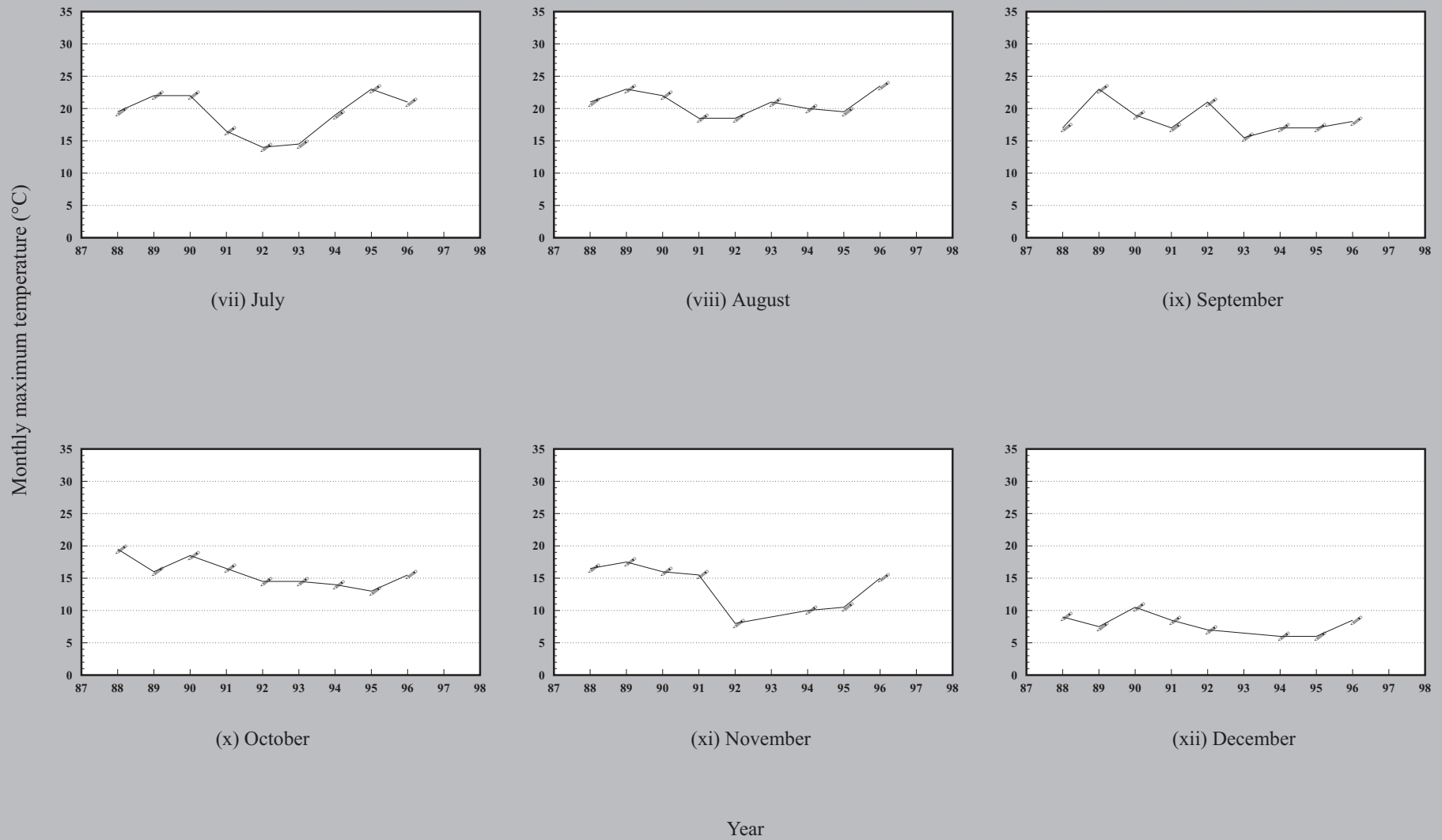
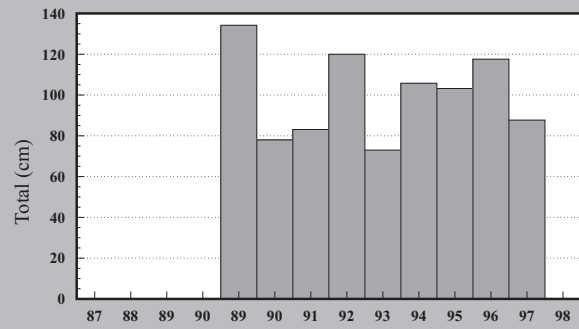
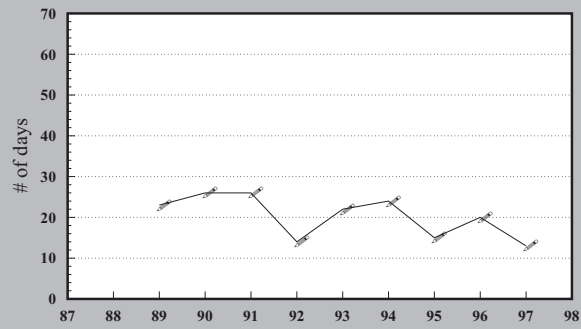


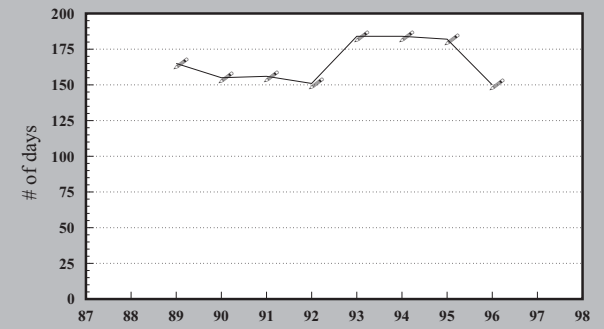
Fig. 2A-24a (con'd). Monthly maximum temperature (°C) for St. Bride's, 1988 - 1997. (missing data may not allow estimation for some years)



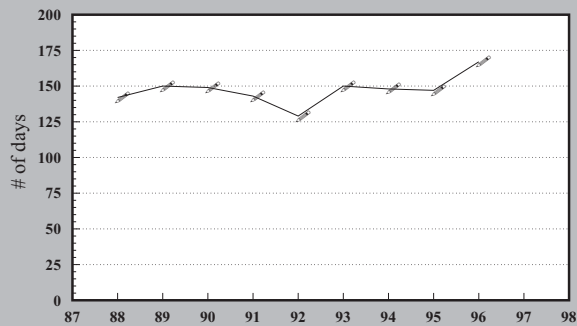
b. Snowfall



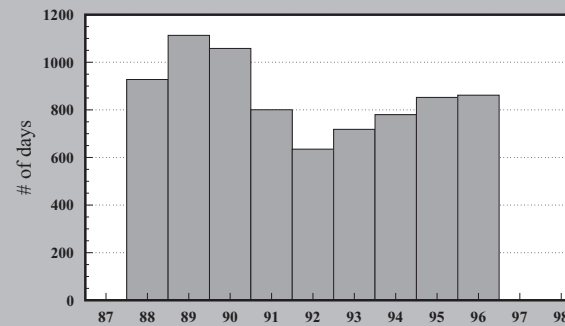
c. Winter rainfall



d. Frost-free period



e. Growing season length



f. Growing degree days

Year

Fig. 2A-24b. Total annual snowfall (cm), c. number of days of winter rainfall, d. length of frost-free period (days), e. length of growing season (days), and f. growing degree days for St. Bride's, 1988 - 1997. (missing data may not allow estimation for some years)

Table 2A-24a. Monthly maximum temperature (°C) for St. Lawrence.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1966	-	4.4	8.3	10.0	16.1	16.7	17.8	23.3	17.8	15.6	12.2	10.0
1967	5.6	6.1	7.2	7.2	12.2	16.1	22.8	21.1	23.3	16.1	15.6	10.0
1968	6.7	6.1	8.9	7.2	15.0	16.7	21.7	20.6	20.0	15.6	10.6	7.8
1969	5.0	5.6	7.8	8.3	16.1	20.0	22.2	20.6	21.7	15.0	11.7	10.6
1970	3.3	5.6	10.0	10.0	14.4	14.4	20.0	22.2	16.7	17.8	13.3	8.3
1971	5.0	5.6	5.0	10.0	15.0	16.1	22.2	21.1	21.1	15.0	11.7	6.7
1972	7.2	5.0	8.3	8.3	10.6	18.9	22.8	21.1	20.0	15.6	11.1	9.4
1973	6.1	6.1	6.7	12.8	15.6	17.8	19.4	22.8	19.4	13.3	11.1	8.9
1974	5.6	5.0	3.9	12.2	12.8	19.4	21.7	23.3	21.1	16.1	10.0	10.0
1975	3.9	0.6	5.6	7.8	19.4	20.0	20.6	22.8	17.2	16.1	10.0	9.4
1976	9.4	7.2	8.9	10.0	15.6	26.1	20.0	23.9	19.4	18.3	11.7	8.3
1977	6.6	4.7	7.4	14.4	17.4	22.2	21.9	20.8	18.5	15.2	12.0	9.0
1978	7.8	4.7	5.4	7.1	16.1	14.5	22.0	21.5	19.0	14.5	11.6	6.7
1979	7.4	7.0	8.0	14.5	16.7	21.3	20.5	21.5	19.2	17.0	16.0	10.0
1980	4.4	5.0	5.4	11.4	13.8	22.0	20.8	22.1	18.5	15.5	11.2	6.8
1981	6.1	7.0	7.7	7.6	16.3	17.4	21.7	21.1	22.2	16.2	14.0	11.0
1982	6.8	6.0	6.2	14.2	18.4	20.2	24.5	22.8	22.2	16.0	14.5	9.5
1983	10.7	6.5	10.0	16.4	17.4	20.5	23.2	23.0	23.0	17.8	15.0	9.5
1984	8.8	10.2	9.8	16.4	17.5	21.0	24.3	24.4	22.7	15.4	12.1	12.7
1985	5.1	4.1	5.6	7.6	19.5	18.7	23.3	26.0	22.5	16.4	11.1	9.5
1986	10.2	6.6	4.5	14.9	23.8	19.8	24.0	24.5	20.5	14.0	11.1	6.4
1987	4.1	4.5	6.0	12.5	19.4	20.1	27.2	27.0	20.1	20.5	14.1	10.3
1988	6.9	11.9	11.0	10.6	18.9	20.8	22.7	26.4	21.7	16.8	12.6	8.0
1989	5.6	5.5	4.3	11.4	19.2	20.1	23.1	24.6	22.0	15.6	15.3	5.5
1990	7.3	5.7	7.5	13.8	16.0	22.3	25.5	27.2	20.4	20.6	12.0	11.7
1991	4.0	9.2	7.7	17.5	17.4	22.8	23.8	23.5	20.5	17.0	14.7	9.0
1992	7.6	5.6	9.1	12.5	20.6	21.8	22.2	23.3	22.6	16.3	11.2	8.3
1993	7.9	9.0	12.4	10.9	16.4	20.9	22.7	23.1	18.9	15.7	12.4	12.6
1994	7.9	4.0	6.7	14.2	14.8	23.4	25.2	23.9	22.0	18.9	15.3	5.9
1995	7.4	8.4	8.8	13.5	16.0	-	24.7	27.0	23.0	16.4	13.1	7.2
1996	8.0	10.9	9.9	-	18.0	21.2	-	28.8	25.9	-	11.7	11.0
1997	7.5	5.4	9.0	-	-	-	-	-	-	-	-	-
Normal	-0.3	-0.9	1.2	4.7	8.9	12.4	16.2	17.7	15.4	10.9	6.6	2.2

Table 2A-24b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for St. Lawrence.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1966	32	-	0	-	15	0	0
1967	34	191.6	0	8	13	3	0
1968	41	147.8	0	0	28	10	0
1969	42	150.7	0	0	0	0	0
1970	32	108.0	3	48	0	0	0
1971	47	161.8	10	18	0	0	0
1972	39	274.1	23	13	28	0	0
1973	28	166.2	0	25	10	0	0
1974	38	215.9	0	41	30	30	0
1975	33	220.3	0	58	66	38	0
1976	41	155.9	0	0	0	0	0
1977	25	139.6	6	11	15	2	0
1978	27	248.6	5	8	7	2	0
1979	43	124.6	4	0	8	0	0
1980	32	176.0	0	8	88	6	0
1981	39	135.7	51	14	0	0	0
1982	31	418.9	0	49	102	19	0
1983	45	166.0	5	1	42	0	0
1984	43	196.8	0	12	0	41	0
1985	22	347.8	18	68	78	24	0
1986	38	295.4	0	0	30	6	0
1987	31	417.4	30	60	99	13	0
1988	36	259.0	10	27	1	0	0
1989	30	319.7	22	30	12	18	0
1990	31	217.8	0	25	10	0	0
1991	24	263.6	24	32	32	0	0
1992	33	245.7	12	4	24	3	0
1993	38	177.1	32	8	4	0	0
1994	34	275.8	10	10	85	7	0
1995	43	245.6	0	36	47	8	0
1996	41	195.7	70	2	1	0	-
1997	32	246.5	-	-	35	30	-
Normal	35	315.2	7	22	27	8	0

Table 2A-24c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for St. Lawrence.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1966	148	829.7	147
1967	133	890.0	126
1968	138	787.3	125
1969	147	814.4	130
1970	130	781.7	106
1971	159	890.3	145
1972	130	755.9	111
1973	171	824.0	136
1974	142	813.1	134
1975	120	787.3	104
1976	161	893.1	128
1977	139	862.7	146
1978	147	795.3	119
1979	134	782.1	118
1980	126	765.1	137
1981	121	955.1	126
1982	134	932.7	133
1983	135	1083.4	135
1984	145	1030.9	122
1985	149	972.7	143
1986	128	830.5	139
1987	139	1096.8	145
1988	160	964.4	121
1989	152	1066.4	131
1990	135	1053.5	132
1991	147	930.6	137
1992	123	877.7	109
1993	146	938.7	126
1994	136	1126.7	130
1995	146	1030.9	160
1996	148	992.4	140
Normal	-	1004.0	-

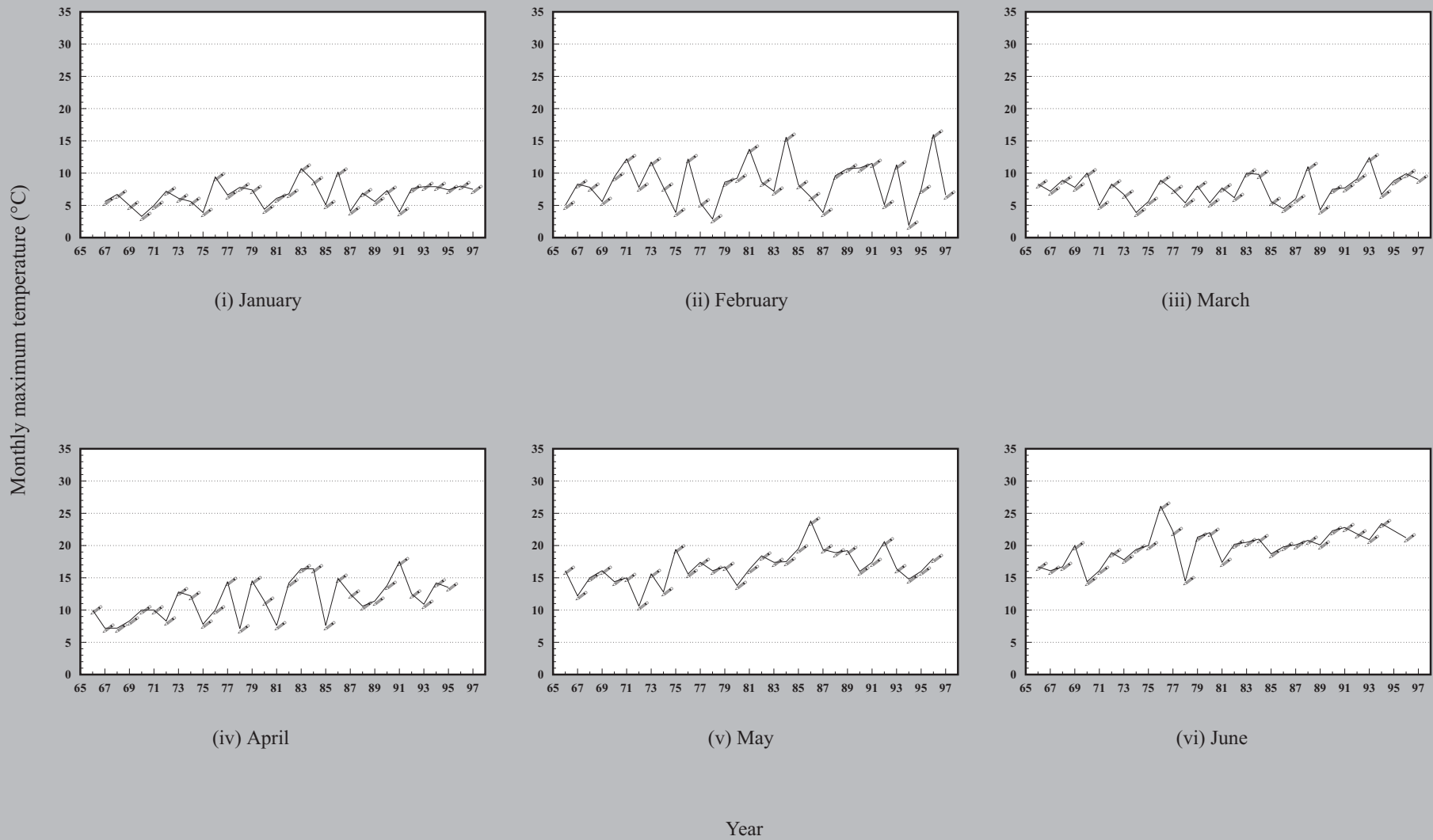


Fig. 2A-25a . Monthly maximum temperature (°C) for St. Lawrence, 1966 - 1997. (missing data may not allow estimation for some years)

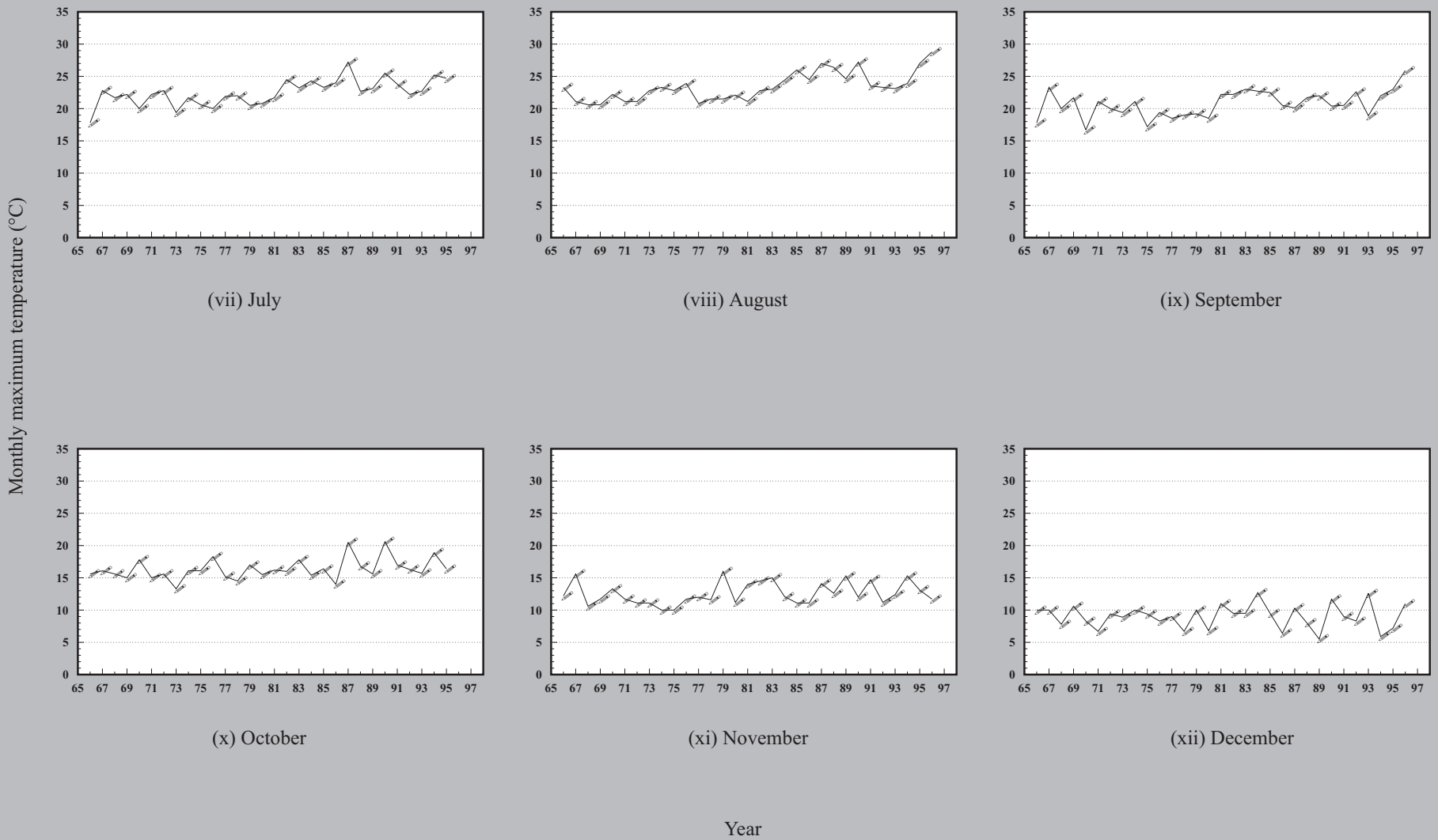


Fig. 2A-25a (con'd). Monthly maximum temperature (°C) for St. Lawrence, 1966 - 1997. (missing data may not allow estimation for some years)

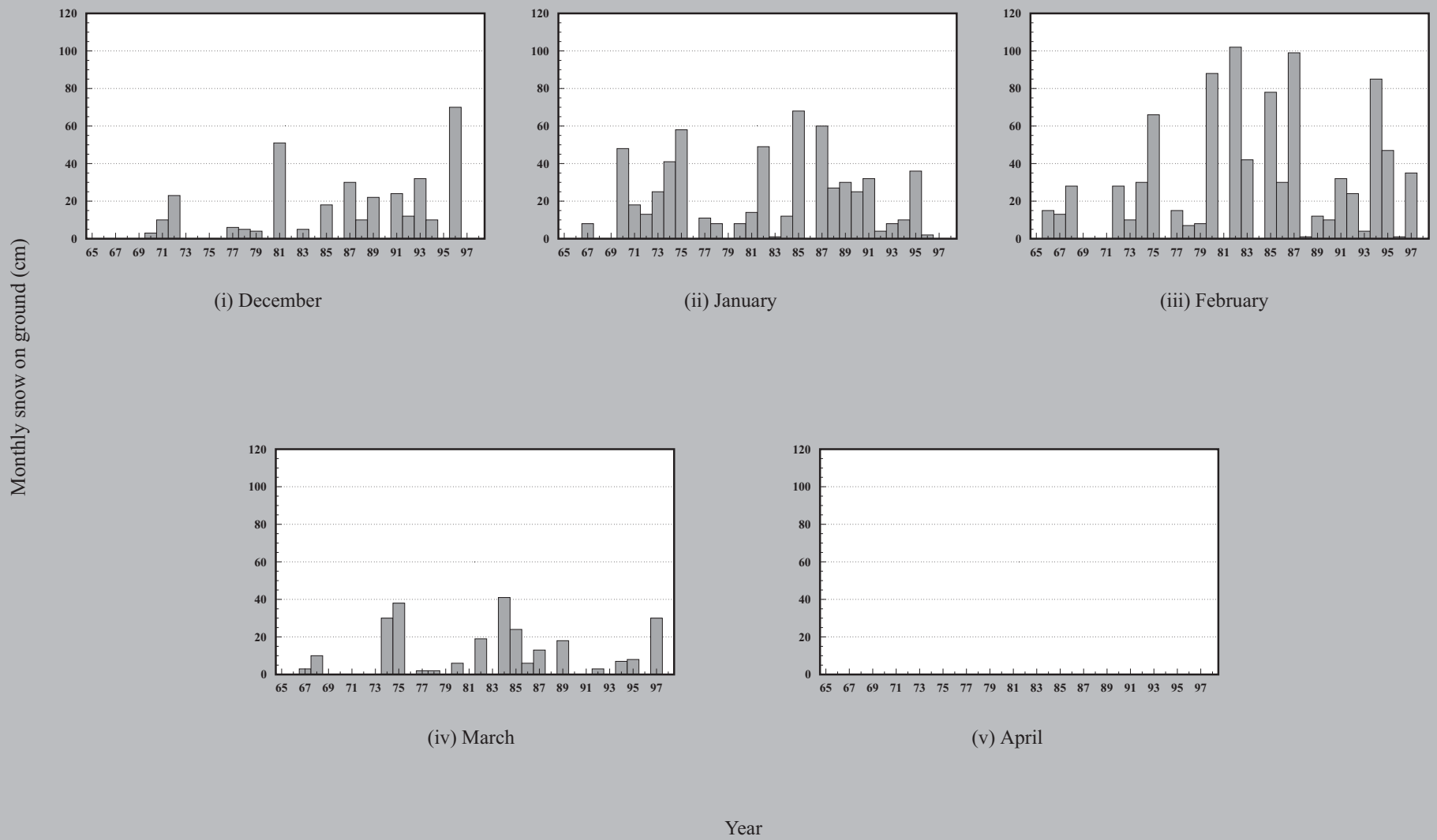
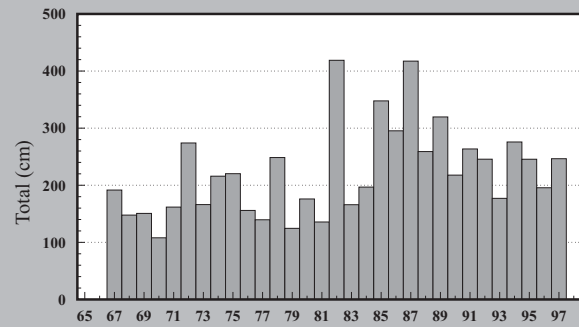
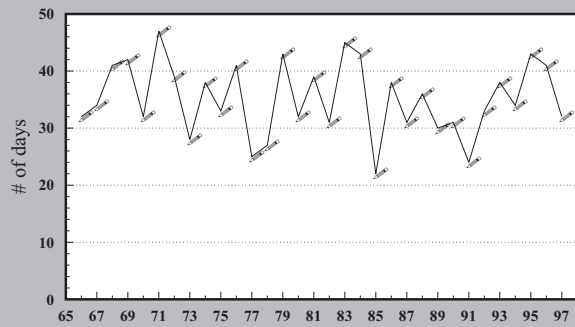


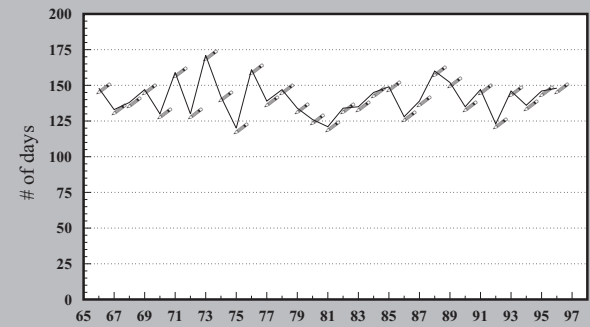
Fig. 2A-25b. Snow depth (cm) on ground on the last day of the month for St. Lawrence, 1966 - 1997. (missing data may not allow estimation for some years)



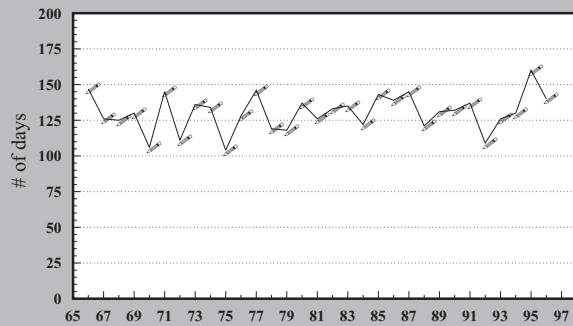
c. Snowfall



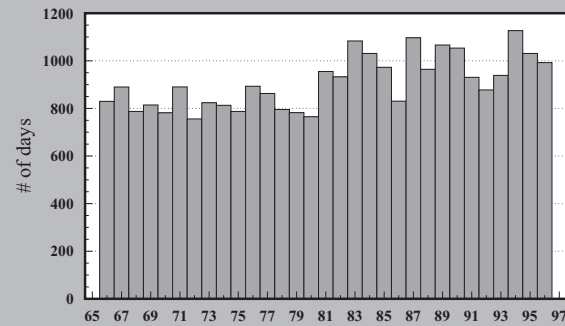
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-25c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for St. Lawrence, 1966 - 1997. (missing data may not allow estimation for some years)

Table 2A-25a. Monthly maximum temperature (°C) for St. John's.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	8.3	5.0	11.7	12.8	16.1	25.0	26.7	25.6	20.0	20.0	19.4	12.2
1951	13.3	12.8	13.9	12.8	24.4	20.0	27.8	27.8	23.3	18.9	18.3	10.6
1952	8.9	6.1	4.4	16.7	16.1	23.9	28.9	27.8	22.8	18.3	13.9	11.1
1953	12.8	9.4	10.0	11.7	18.3	23.3	27.2	23.9	26.1	18.9	17.8	12.2
1954	7.2	12.8	9.4	16.1	23.9	26.1	26.7	22.2	23.3	17.8	17.2	14.4
1955	5.6	11.1	8.3	10.6	18.9	24.4	26.7	26.7	22.2	20.0	12.2	5.6
1956	7.2	7.2	7.8	14.4	21.7	26.1	25.6	23.3	22.8	16.1	15.6	12.8
1957	10.6	1.7	5.0	10.0	16.7	26.7	27.2	26.1	23.3	17.8	16.7	16.1
1958	10.0	5.0	5.6	18.3	22.2	22.2	25.6	25.6	22.8	21.7	11.1	6.7
1959	7.2	6.1	6.1	14.4	17.8	23.9	27.8	26.7	25.6	12.8	17.8	15.0
1960	6.7	5.0	6.7	15.6	23.9	26.7	27.2	25.6	23.9	18.3	12.8	12.2
1961	6.1	6.7	6.1	7.8	22.2	26.1	28.9	26.7	26.7	22.8	16.1	7.8
1962	8.9	10.0	18.3	13.9	16.1	26.7	26.1	25.6	25.0	20.6	18.3	13.3
1963	12.2	6.7	12.2	14.4	21.1	22.8	30.6	23.3	23.3	17.2	16.7	13.9
1964	6.7	3.9	7.2	16.1	22.2	22.2	27.2	23.3	23.9	20.0	10.6	9.4
1965	8.9	5.0	3.9	11.1	20.0	24.4	27.2	27.8	24.4	17.8	15.0	10.6
1966	2.2	5.0	9.4	10.6	21.1	22.8	26.7	25.0	21.7	18.3	16.1	15.0
1967	8.9	8.3	9.4	7.2	13.9	28.9	28.9	28.3	23.3	19.4	18.3	12.2
1968	10.0	7.8	15.6	15.6	17.8	21.1	28.9	24.4	22.8	21.7	11.7	11.7
1969	5.0	5.6	7.8	14.4	17.8	26.1	24.4	25.0	22.2	16.7	16.7	14.4
1970	3.3	9.4	7.8	13.9	19.4	25.6	28.3	28.3	25.0	20.6	15.6	10.0
1971	8.9	12.2	11.1	14.4	23.3	26.7	26.7	27.8	22.8	17.8	17.2	11.7
1972	10.6	7.8	13.9	11.1	25.6	26.1	27.8	25.0	21.1	22.8	12.2	13.3
1973	10.0	11.7	8.3	15.6	19.4	23.9	27.8	25.6	22.2	17.2	13.9	12.8
1974	6.1	7.8	8.9	12.2	13.9	27.8	26.1	24.4	21.7	17.8	11.7	11.7
1975	4.4	3.9	8.9	12.2	19.4	24.4	29.4	27.2	25.6	19.4	15.0	9.4
1976	14.4	12.2	14.4	15.0	21.7	27.8	26.7	27.8	21.1	21.7	17.8	9.4
1977	5.7	5.4	10.0	18.5	18.0	27.8	27.3	28.5	20.1	21.2	18.3	9.8
1978	12.1	2.9	9.5	13.2	19.0	25.7	26.3	28.6	22.8	20.6	13.1	7.0
1979	15.2	8.6	14.6	12.0	23.4	26.0	27.4	29.6	21.4	21.3	18.5	13.8
1980	4.3	9.2	9.0	13.1	18.6	25.1	26.8	23.8	22.0	18.6	12.1	11.8
1981	11.0	13.7	6.6	15.1	24.2	25.2	28.2	27.7	19.9	17.7	15.4	12.7

Table 2A-25a (con'd). Monthly maximum temperature (°C) for St. John's.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1982	7.4	8.6	13.2	20.0	17.7	19.0	30.2	26.8	25.5	18.8	16.9	12.0
1983	10.5	7.2	12.8	19.6	20.7	29.3	31.5	27.9	23.6	19.6	13.3	10.6
1984	13.3	15.6	12.5	9.9	20.4	22.7	28.7	28.6	23.9	15.4	17.8	14.5
1985	5.2	8.2	5.6	12.3	20.3	25.7	30.8	26.0	22.9	17.9	10.4	12.6
1986	13.4	6.3	11.6	24.1	25.4	26.9	26.6	24.8	18.7	17.0	12.8	5.6
1987	5.6	3.9	6.0	15.7	18.8	25.5	28.6	25.2	20.2	24.6	15.2	11.9
1988	10.2	9.6	14.5	11.2	24.6	27.6	25.6	27.2	24.8	22.1	16.9	9.2
1989	8.8	10.7	10.1	17.7	23.5	25.5	26.8	28.3	27.0	19.5	18.4	6.5
1990	13.5	10.8	13.4	14.6	22.6	24.6	27.3	28.1	24.3	20.0	17.2	15.3
1991	8.5	11.5	11.9	12.9	19.7	23.4	28.3	25.9	22.8	19.6	17.1	11.3
1992	6.6	5.1	9.0	11.6	23.4	23.5	25.7	25.5	25.3	16.2	15.3	11.0
1993	10.7	11.3	11.1	18.1	23.4	25.7	25.4	28.2	23.0	18.8	15.1	14.8
1994	10.4	1.9	12.7	15.3	20.5	24.7	27.2	27.7	23.1	20.1	17.1	4.1
1995	9.3	7.5	11.4	13.4	18.7	24.8	28.2	29.2	22.5	19.0	13.7	8.0
1996	11.6	16.0	10.8	13.8	18.2	23.6	26.1	31.0	22.5	19.7	13.7	13.7
1997	5.9	6.6	6.7	6.5	18.3	23.6	27.7	25.7	21.8	-	-	-
Normal	-0.7	-1.4	1.0	4.8	10.3	15.8	20.2	19.5	15.6	10.6	6.2	1.5

Table 2A-25b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for St. John's.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	36	-	0	0	33	3	-
1951	61	265.0	0	8	43	0	-
1952	41	359.2	-	10	15	-	-
1953	43	254.7	10	0	20	-	-
1954	43	299.7	48	33	-	3	-
1955	45	501.3	58	69	5	25	-
1956	52	451.2	-	5	36	13	-
1957	24	436.8	-	10	74	25	-
1958	36	160.9	43	5	23	-	-
1959	21	428.8	36	71	69	81	-
1960	27	441.5	-	71	25	64	-
1961	24	371.6	-	43	43	8	3
1962	39	265.3	15	10	30		-
1963	37	223.8	43	3	20	3	8
1964	31	433.3	-	23	23	48	-
1965	43	307.1	5	13	15	13	-
1966	40	351.9	-	13	36	-	-
1967	39	331.0	-	8	13	8	3
1968	39	190.5	-	-	15	10	-
1969	40	254.2	0	15	-	-	-
1970	43	194.5	8	38	-	0	-
1971	48	293.9	36	-	-	-	-
1972	37	365.8	28	-	30	-	-
1973	35	252.1	-	-	3	5	-
1974	34	288.0	25	-	18	30	-
1975	35	336.6	-	-	76	23	-
1976	52	269.7	3	-	-	0	-
1977	31	247.2	2	-	42	4	-
1978	31	553.4	3	-	42	24	-
1979	51	250.5	1	-	10	0	-
1980	38	247.8	-	-	32	5	-
1981	38	205.7	13	-	-	3	-
1982	37	334.2	-	-	88	12	-
1983	60	173.7	-	-	16	0	-
1984	54	224.0	5	-	1	45	-
1985	35	285.4	25	-	26	16	-
1986	41	249.7	2	-	4		-
1987	41	363.6	38	-	108	56	-
1988	50	239.2	14	-	1	-	-
1989	33	321.8	24	-	18	19	-
1990	37	207.3	0	-	9	-	-

Table 2A-25b (con'd). Total annual snowfall (cm), number of days of winter rainfall and snow depth (cm) on ground on the last day of the month for St. John's.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1991	40	219.2	40	-	22	-	-
1992	44	349.0	15	-	33	-	-
1993	42	291.3	28	-	3	-	-
1994	45	293.5	9	-	63	13	-
1995	53	410.4	7	-	85	2	-
1996	48	276.6	-	-	-	-	-
1997	32	315.2	-	-	26	8	27
Normal	40	287.3	10	21	24	11	0

Table 2A-25c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for St. John's.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	86	1064.7	135
1951	116	1126.2	122
1952	148	1234.1	139
1953	124	1061.2	114
1954	112	1014.7	113
1955	116	989.5	118
1956	108	865.3	114
1957	126	952.1	111
1958	149	1070.3	130
1959	117	936.9	113
1960	148	1259.1	150
1961	143	1322.2	150
1962	135	852.6	124
1963	143	903.7	115
1964	145	894.3	115
1965	142	984.1	103
1966	151	1066.7	132
1967	140	1313.4	129
1968	131	846.6	127
1969	149	990.7	122
1970	141	1164.4	135
1971	140	1078.1	137
1972	139	1076.3	124
1973	140	1035.4	113
1974	135	858.0	106
1975	104	1037.9	104
1976	111	1065.6	120
1977	150	1037.2	125
1978	102	986.9	119

Table 2A-25c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for St. John's.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1979	114	1110.6	135
1980	117	848.7	124
1981	123	1040.1	121
1982	114	937.2	115
1983	122	1019.7	116
1984	110	1059.8	103
1985	133	1047.1	132
1986	124	954.3	135
1987	138	1036.1	130
1988	175	1134.2	134
1989	151	1089.0	125
1990	158	1066.2	130
1991	133	887.6	131
1992	147	990.7	131
1993	127	798.3	103
1994	132	1131.8	125
1995	140	1035.6	128
1996	145	1041.7	123
1997	137	1072.1	123
Normal	-	1209.0	-

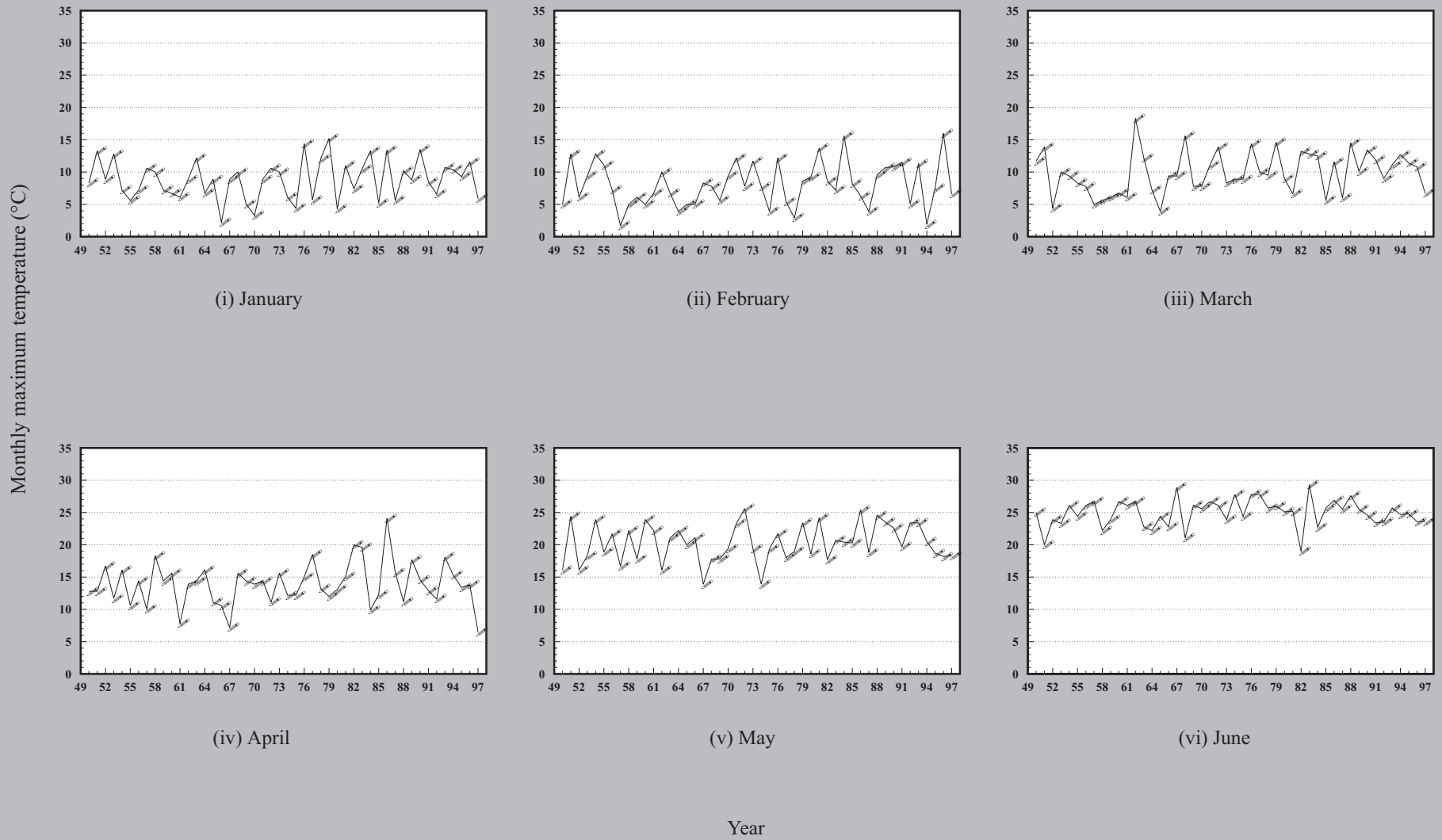


Fig. 2A-26a. Monthly maximum temperature (°C) for St. John's, 1950 - 1997. (missing data may not allow estimation for some years)

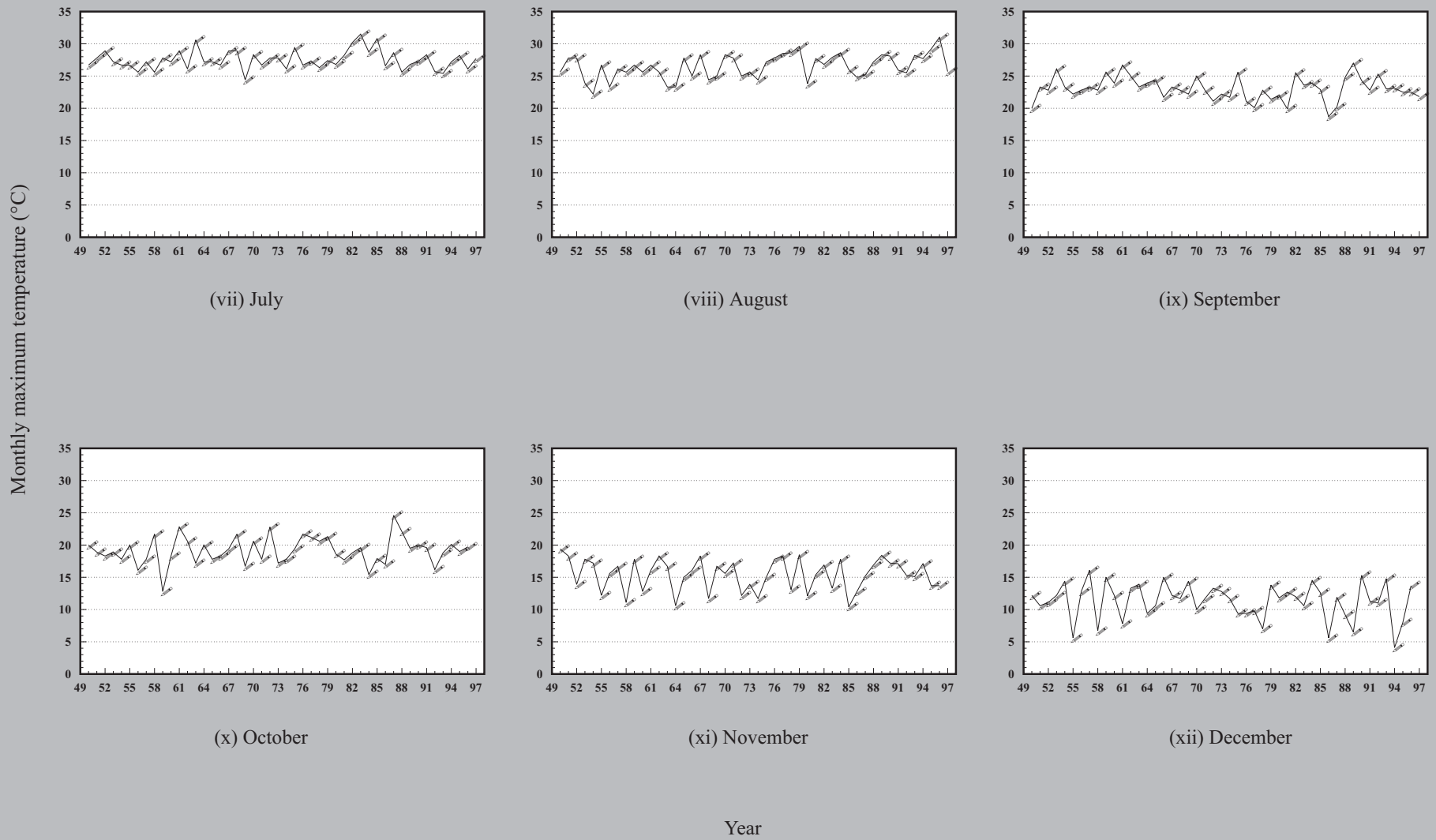


Fig. 2A-26a (con'd). Monthly maximum temperature (°C) for St. John's, 1950 - 1997. (missing data may not allow estimation for some years)

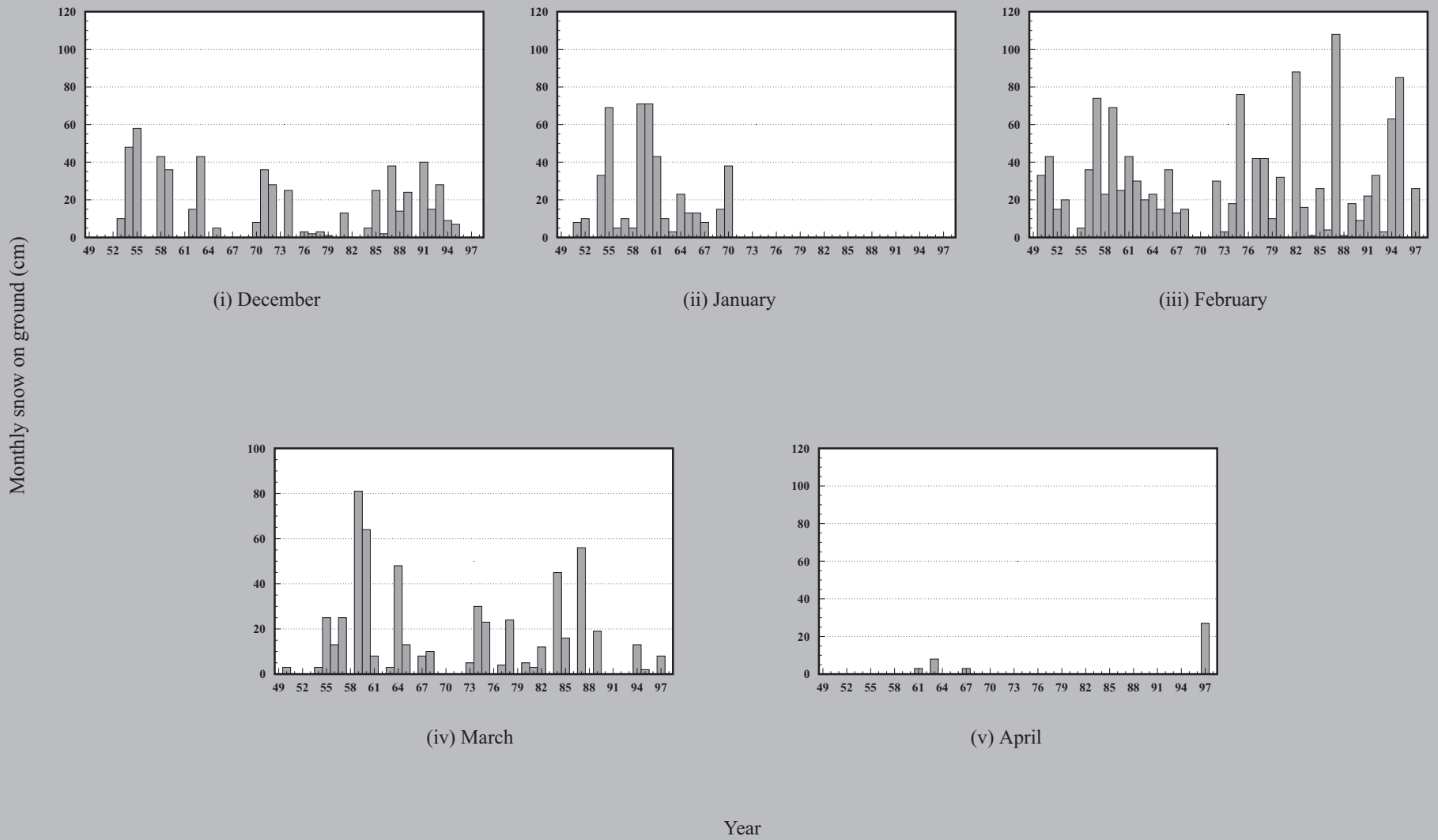
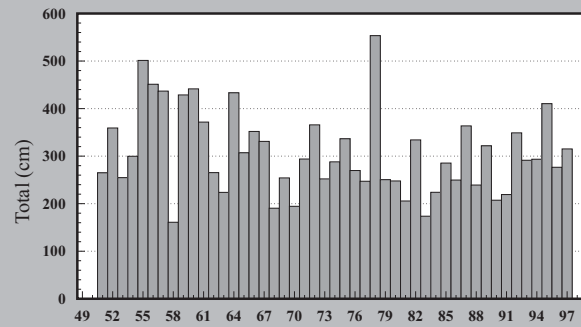
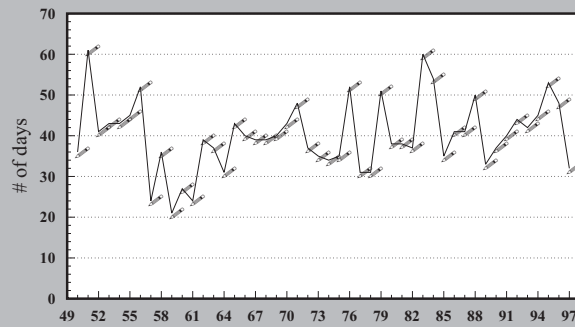


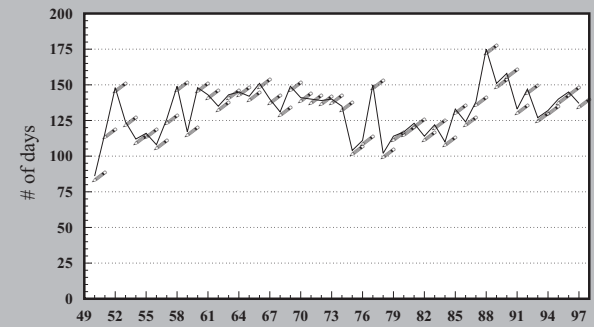
Fig. 2A-26b. Snow depth (cm) on ground on the last day of the month for St. John's, 1950 - 1997. (missing data may not allow estimation for some years)



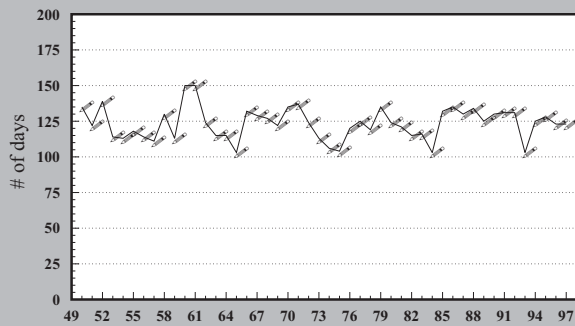
c. Snowfall



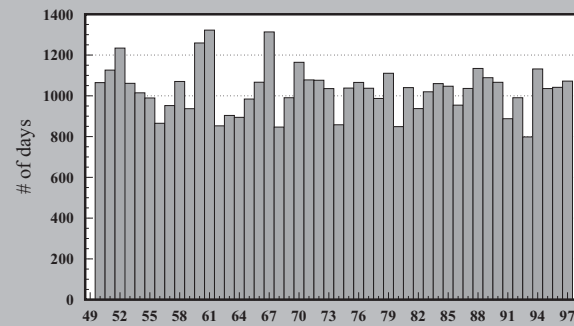
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-26c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for St. John's, 1950 - 1997. (missing data may not allow estimation for some years)

Table 2A-26a. Monthly maximum temperature (°C) for Sop's Arm.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1980	4.0	5.0	5.0	13.0	20.0	30.0	28.0	23.0	21.0	16.0	10.0	7.0
1981	-1.0	9.0	6.0	12.0	20.0	22.0	30.0	26.0	24.0	18.0	16.0	7.0
1982	6.0	1.0	6.0	12.0	14.0	15.0	31.0	28.0	30.0	16.0	13.0	8.0
1983	10.0	7.0	10.0	10.0	18.0	25.0	25.0	25.0	21.0	19.0	7.0	6.0
1984	4.0	3.0	10.0	6.0	16.0	18.0	29.0	28.0	20.0	10.0	10.0	8.0
1985	0.0	4.0	4.0	7.0	12.0	25.0	29.0	24.0	17.0	13.0	7.5	5.0
1986	9.0	3.0	11.0	22.0	27.0	22.0	28.0	27.5	21.5	16.0	7.0	5.0
1987	2.0	2.0	11.0	19.0	22.0	25.0	30.5	28.0	25.0	21.5	14.0	5.0
1988	5.5	5.5	12.5	11.0	25.5	30.5	30.5	30.0	23.5	17.5	13.0	5.0
1989	6.0	6.5	10.0	13.0	22.0	30.0	30.0	30.0	27.0	17.0	15.0	5.0
1990	8.5	3.5	12.5	11.5	21.5	30.0	28.5	31.0	24.0	20.0	8.5	8.0
1991	-0.5	5.5	7.5	13.5	20.0	23.0	30.5	29.0	22.5	17.5	15.0	6.5
1992	7.0	1.5	11.0	14.5	26.5	22.0	28.0	27.5	24.0	17.0	13.0	5.5
1993	5.0	9.5	12.0	15.0	18.0	30.0	26.5	29.5	24.0	19.0	13.5	8.0
1994	7.0	2.0	7.0	13.5	18.5	25.5	28.0	28.5	22.0	21.0	11.5	6.0
1995	6.0	6.5	9.0	10.5	16.5	24.5	30.5	31.0	24.0	20.0	17.5	5.0
1996	11.0	11.5	10.5	16.0	18.5	27.0	27.0	32.0	28.0	18.0	16.0	12.5
1997	9.0	3.0	6.5	8.0	17.5	24.5	27.0	28.0	24.5	-	-	-

Table 2A-26b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Sop's Arm.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1980	0	154.4	40	35	40	4	0
1981	11	202.9	-	42	0	-	0
1982	7	391.5	3	68	86	42	10
1983	15	270.2	20	30	36	20	0
1984	6	268.9	20	23	35	29	4
1985	2	262.2	13	52	32	22	0
1986	14	189.0	40	25	22	7	0
1987	8	153.0	42	79	111	92	0
1988	7	-	30	64	102	65	0
1989	4	160.2	30	51	54	36	0
1990	10	197.3	23	39	61	25	0
1991	14	208.0	36	31	32	31	0
1992	6	182.8	29	21	69	34	0
1993	13	256.3	54	59	81	62	0
1994	19	327.4	46	27	55	66	0
1995	14	346.9	0	93	82	97	10
1996	24	189.1	4	0	9	0	0
1997	12	258.0	-	20	31	46	17

Table 2A-26c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Sop's Arm.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1980	160	901.6	120
1981	182	1211.5	134
1982	175	813.1	119
1983	184	886.4	122
1984	161	934.9	104
1985	178	703.2	110
1986	165	892.4	131
1987	144	1138.6	134
1988	150	1142.8	134
1989	131	1245.7	128
1990	137	1198.6	130
1991	131	839.4	115
1992	122	833.9	115
1993	111	777.5	104
1994	130	1104.5	123
1995	143	1096.0	133
1996	145	1098.9	120

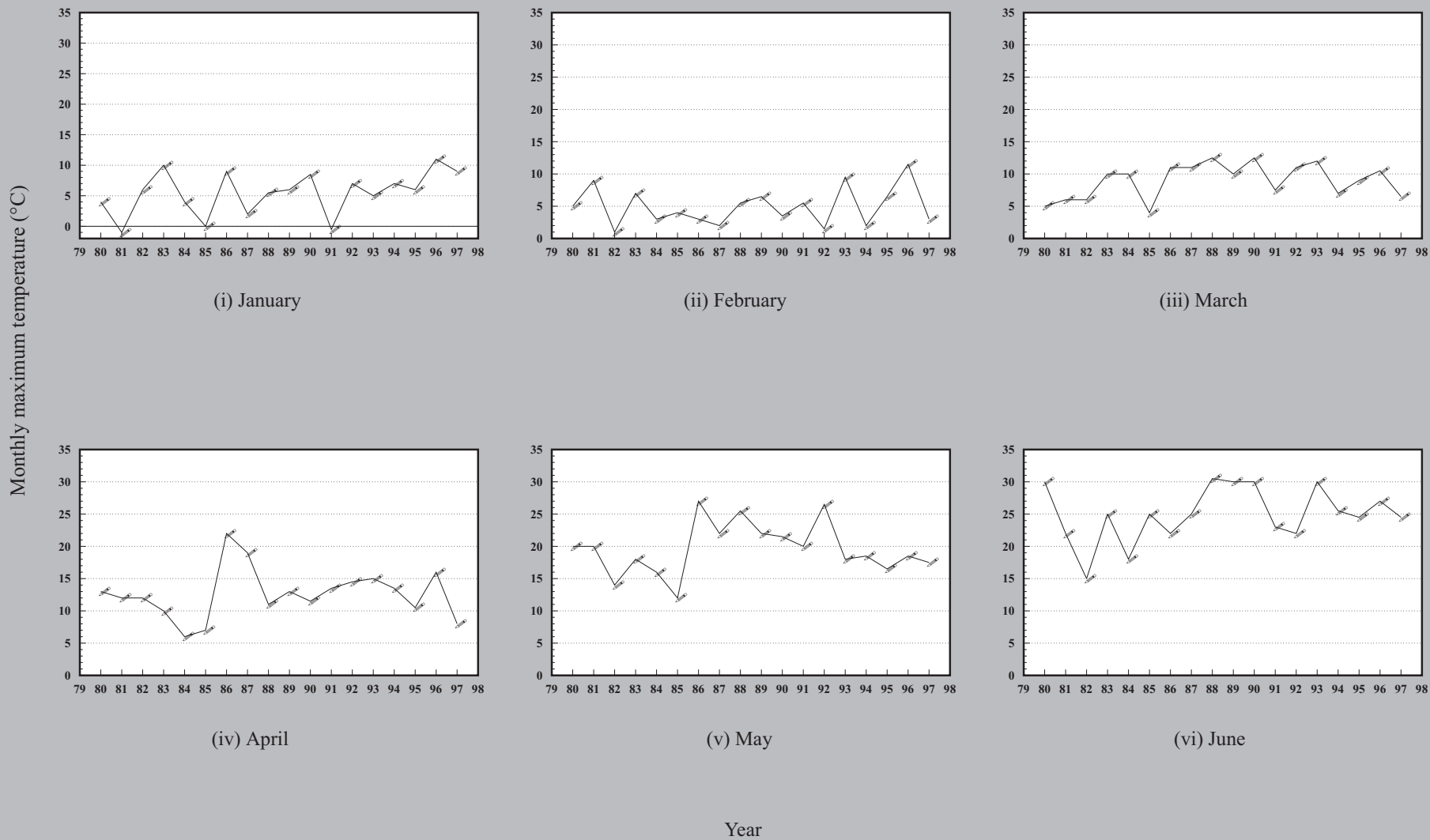


Fig. 2A-27a. Monthly maximum temperature (°C) for Sop's Arm, 1980 - 1997. (missing data may not allow estimation for some years)

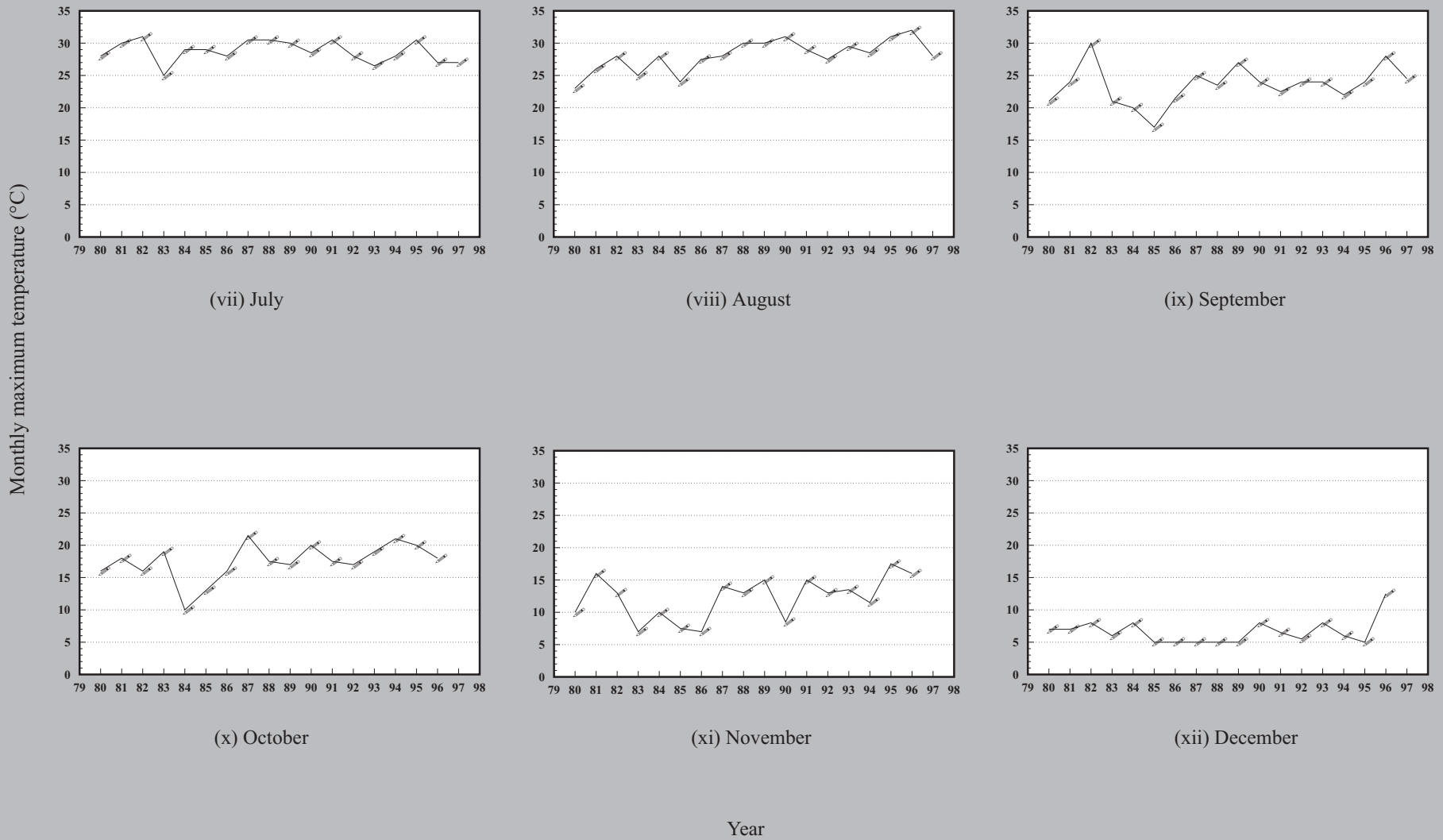


Fig. 2A-27a (con'd). Monthly maximum temperature (°C) for Sop's Arm, 1980 - 1997. (missing data may not allow estimation for some years)

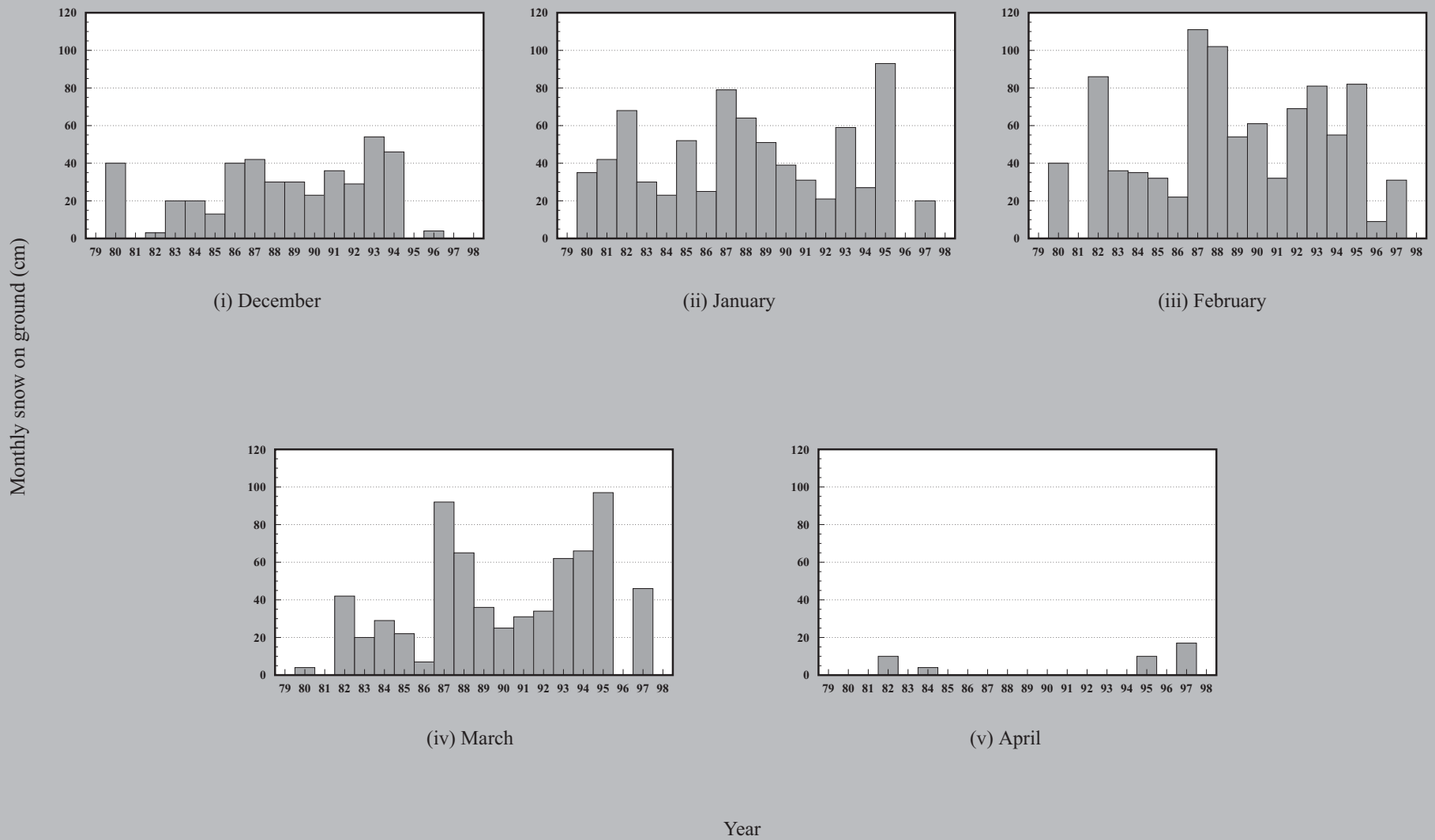
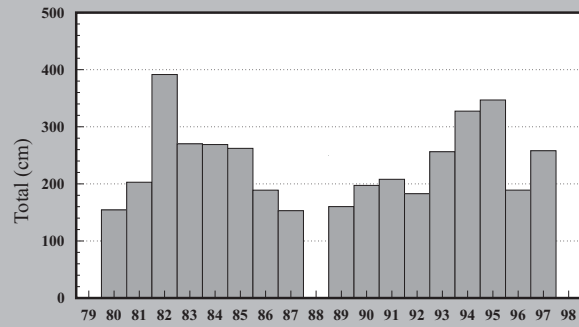
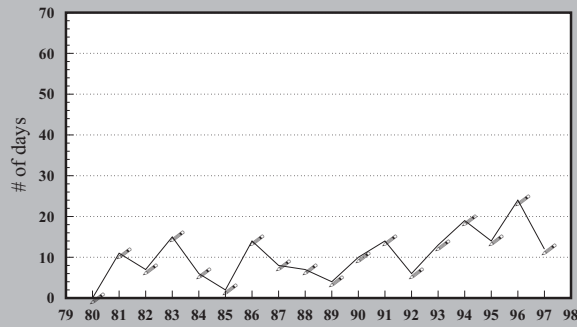


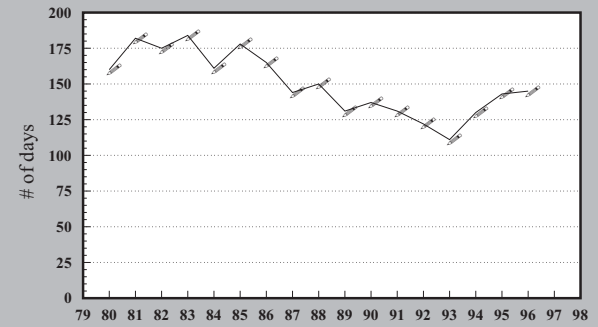
Fig. 2A-27b. Snow depth (cm) on ground on the last day of the month for Sop's Arm, 1980 - 1997. (missing data may not allow estimation for some years)



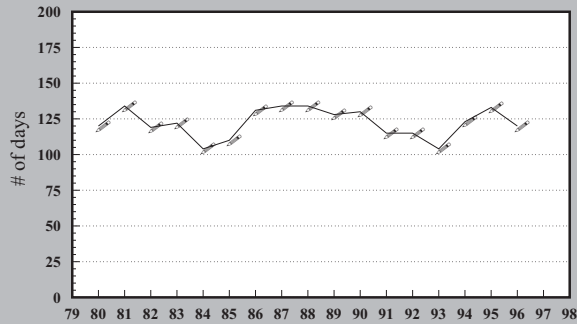
c. Snowfall



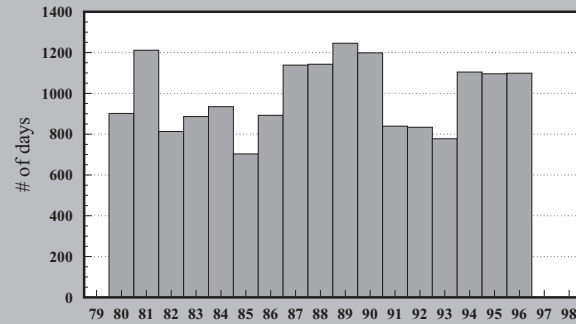
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-27c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Sop's Arm, 1980 - 1997. (missing data may not allow estimation for some years)

Table 2A-27a. Monthly maximum temperature (°C) for Stephenville.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1950	7.8	2.8	9.4	10.6	27.2	24.4	26.7	24.4	21.7	18.3	16.7	-
1951	9.4	11.7	17.2	17.2	23.9	27.2	26.1	27.8	23.9	19.4	19.4	9.4
1952	7.8	6.7	7.2	16.1	21.1	22.2	27.8	26.1	24.4	19.4	12.2	11.1
1953	8.3	11.1	13.9	16.7	17.2	22.2	27.8	26.1	27.8	16.7	17.2	12.2
1954	8.9	11.1	15.6	14.4	21.1	30.0	23.9	21.7	22.8	16.1	15.6	11.7
1955	6.7	10.0	7.8	13.9	17.8	23.9	28.3	22.2	23.3	16.1	11.1	2.8
1956	11.7	6.7	7.8	13.9	18.3	20.6	24.4	26.7	23.3	17.8	13.3	8.3
1957	5.0	3.9	8.3	12.8	15.6	25.6	26.1	23.9	21.1	17.8	15.6	15.6
1958	12.2	8.3	11.1	15.6	20.0	21.1	25.0	24.4	22.2	17.8	15.0	5.6
1959	8.3	6.7	5.0	16.1	20.6	27.8	27.8	25.0	22.2	16.7	16.1	10.0
1960	8.9	9.4	6.7	11.1	24.4	25.6	26.7	27.8	23.9	17.8	12.8	10.0
1961	0.6	0.6	7.2	11.1	22.2	26.7	28.3	28.3	25.0	20.0	15.0	8.3
1962	6.1	6.7	13.3	12.8	19.4	23.3	24.4	26.1	21.1	15.6	16.1	11.7
1963	10.0	3.9	10.6	13.3	20.0	21.1	25.0	22.8	21.1	18.3	16.7	11.7
1964	5.0	4.4	8.3	9.4	21.7	18.9	24.4	23.3	20.0	16.1	10.0	10.0
1965	3.9	7.2	7.2	9.4	18.3	21.7	25.6	23.9	24.4	15.0	12.8	7.8
1966	5.0	5.0	15.6	-	21.7	-	26.1	26.7	21.7	16.7	18.3	16.1
1967	5.0	3.3	8.3	11.7	17.8	26.7	25.6	25.6	22.2	20.0	20.6	10.0
1968	7.8	8.9	9.4	15.6	18.9	21.1	23.9	23.3	22.2	21.7	9.4	8.3
1969	6.7	7.2	8.9	9.4	15.6	25.6	26.1	26.1	20.0	15.6	17.8	15.0
1970	2.8	11.7	4.4	9.4	18.3	22.2	27.2	26.7	19.4	19.4	16.7	7.8
1971	4.4	9.4	6.7	15.0	21.7	21.7	25.0	25.6	22.2	17.8	15.6	5.6
1972	7.2	7.2	9.4	8.3	18.3	25.6	27.8	22.2	23.9	19.4	11.1	9.4
1973	7.8	8.9	8.9	14.4	20.0	21.7	26.1	26.1	23.9	16.1	12.8	13.9
1974	5.0	8.3	7.2	10.6	12.8	23.9	24.4	25.0	21.1	-	14.4	12.8
1975	3.9	4.4	11.7	11.1	19.4	23.3	26.7	28.3	22.8	17.2	15.6	10.0
1976	8.3	12.2	12.2	13.9	22.2	22.2	27.8	26.1	22.8	18.9	12.8	9.4
1977	8.2	8.4	8.8	16.2	19.8	25.6	24.9	27.3	20.5	20.7	18.8	11.2
1978	8.5	6.9	6.8	12.4	20.5	24.4	26.5	24.0	17.7	18.7	10.9	8.0
1979	10.0	8.2	15.2	19.5	24.6	25.1	25.3	25.5	23.7	15.8	14.3	11.2

Table 2A-27a (con'd). Monthly maximum temperature (°C) for Stephenville.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1980	7.1	5.0	7.0	19.7	14.4	25.3	25.6	23.9	21.4	17.6	13.2	6.8
1981	7.7	10.3	11.0	16.5	20.4	23.9	24.4	24.6	27.8	20.4	17.5	14.6
1982	5.2	4.8	7.9	12.8	21.8	20.9	26.9	24.5	20.1	16.3	18.4	9.0
1983	11.1	8.2	12.6	20.0	22.0	24.8	25.5	25.1	25.0	19.7	16.2	7.4
1984	7.0	7.8	11.9	18.2	21.2	21.3	25.6	27.2	21.0	16.2	15.7	12.6
1985	3.9	5.2	6.2	15.8	20.8	26.6	27.5	26.2	20.8	17.4	11.2	10.8
1986	12.4	6.7	8.0	23.8	20.9	24.2	27.5	24.4	21.7	14.4	11.7	6.2
1987	4.2	3.1	10.4	14.8	19.8	22.9	30.6	25.1	22.2	20.9	15.0	10.1
1988	7.0	4.4	12.1	13.4	19.4	22.6	25.7	27.2	22.4	16.3	12.6	4.4
1989	6.4	6.6	6.6	12.6	21.8	28.9	25.6	24.7	29.1	17.6	17.4	5.2
1990	9.1	4.1	5.4	11.0	16.4	22.3	25.2	28.1	22.5	19.5	13.1	10.2
1991	4.0	8.0	9.8	14.0	14.3	27.5	25.1	26.8	20.5	18.3	16.8	8.0
1992	7.3	4.3	11.6	13.6	19.9	24.5	23.1	22.9	21.8	19.2	11.3	6.5
1993	4.5	8.5	5.7	15.5	20.1	22.7	23.7	28.0	21.0	16.9	11.9	13.8
1994	7.3	3.0	7.2	13.5	16.5	22.4	24.8	24.9	21.3	17.3	17.5	4.5
1995	6.4	6.6	9.0	13.4	19.5	21.1	26.1	26.2	20.4	22.2	17.4	6.9
1996	10.4	12.7	11.1	17.4	16.7	24.0	23.7	25.0	25.2	17.1	18.1	14.6
1997	8.4	4.3	6.3	9.8	15.2	27.1	27.7	24.6	21.3	17.7	-	-
Normal	-2.3	-3.1	0.5	5.6	11.3	16.1	20.0	20.0	15.8	10.4	5.6	0.3

Table 2A-27b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Stephenville.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1950	18	-	-	10	107	25	-
1951	26	133.0	-	18	-	-	-
1952	22	149.7	-	-	20	-	-
1953	33	163.2	10	3	8	-	-
1954	-	310.4	120	89	-	23	-
1955	-	166.9	79	41	5	-	-
1956	-	330.2	8	8	76	36	-
1957	-	363.2	-	38	46	8	-
1958	-	141.9	-	-	23	-	-
1959	-	600.3	-	33	61	43	-
1960	-	221.9	15	-	20	20	-
1961	-	472.7	3	132	89	15	-
1962	-	405.5	51	23	48	-	-
1963	-	385.0	56	13	-	-	-
1964	-	614.2	-	23	38	5	-
1965	-	499.9	33	69	43	51	-
1966	-	301.9	10	-	41	-	13
1967	15	343.6	-	18	127	81	8
1968	36	321.8	13	43	33	-	-
1969	31	265.2	-	8	-	3	-
1970	17	271.6	13	48	25	30	-
1971	26	286.3	69	51	18	15	-
1972	24	318.2	61	58	69	20	-
1973	24	388.3	5	61	124	46	-
1974	29	344.3	23	51	71	76	5
1975	19	330.2	5	81	102	36	-
1976	27	300.5	28	13	28	-	-
1977	22	397.2	7	49	33	5	-
1978	18	447.4	58	22	40	41	-
1979	23	299.3	3	-	40	-	-
1980	13	344.2	20	85	99	8	-
1981	30	311.7	29	26	-	-	-
1982	22	662.0	3	122	160	47	3
1983	33	263.9	25	18	33	2	-
1984	25	347.9	7	39	7	-	-
1985	18	435.2	19	100	43	40	1
1986	31	362.2	16	30	51	19	-
1987	30	336.8	37	49	75	7	-
1988	29	327.4	29	40	48	2	-

Table 2A-27b (con'd). Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Stephenville.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1989	24	337.9	120	52	55	38	-
1990	26	537.9	4	64	108	48	-
1991	20	376.6	42	89	52	6	-
1992	20	412.3	29	18	63	17	-
1993	22	414.1	67	92	92	29	-
1994	29	376.5	12	36	58	28	-
1995	29	441.5	5	80	109	34	-
1996	35	237.9	22	11	9	10	-
1997	27	437.4	-	76	130	85	16
Normal	24	373.7	25	48	55	21	1

Table 2A-27c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Stephenville.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1950	141	1161.1	147
1951	159	1287.8	141
1952	156	1403.7	152
1953	165	1109.8	122
1954	177	1192.3	130
1955	177	1241.5	168
1956	124	1025.3	124
1957	153	1155.1	143
1958	159	1133.8	142
1959	162	1225.9	151
1960	175	1385.0	169
1961	166	1459.6	151
1962	152	1097.3	134
1963	147	991.9	132
1964	150	990.4	143
1965	145	1098.6	143
1966	167	1228.8	159
1967	136	1311.1	126
1968	151	1062.7	144
1969	138	1085.3	128
1970	153	1220.0	153
1971	161	1168.8	139
1972	130	1093.5	124
1973	175	1256.2	148

Table 2A-27c (con'd). Length of frost free period (days), number of growing degree days, and length of growing season (days) for Stephenville.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1974	140	1051.6	132
1975	134	1266.4	142
1976	143	1282.9	137
1977	163	1193.0	146
1978	144	1078.0	133
1979	172	1351.5	150
1980	148	1083.1	141
1981	164	1252.0	145
1982	132	1083.4	131
1983	163	1262.0	143
1984	165	1170.7	121
1985	148	1268.8	147
1986	133	1060.8	143
1987	141	1263.8	140
1988	165	1248.6	150
1989	175	1382.8	145
1990	137	1239.6	131
1991	157	1099.8	149
1992	168	1032.3	121
1993	150	1165.6	148
1994	140	1148.5	129
1995	180	1222.6	159
1996	161	1135.5	130
1997	166	-	-
Normal	-	1308.0	-

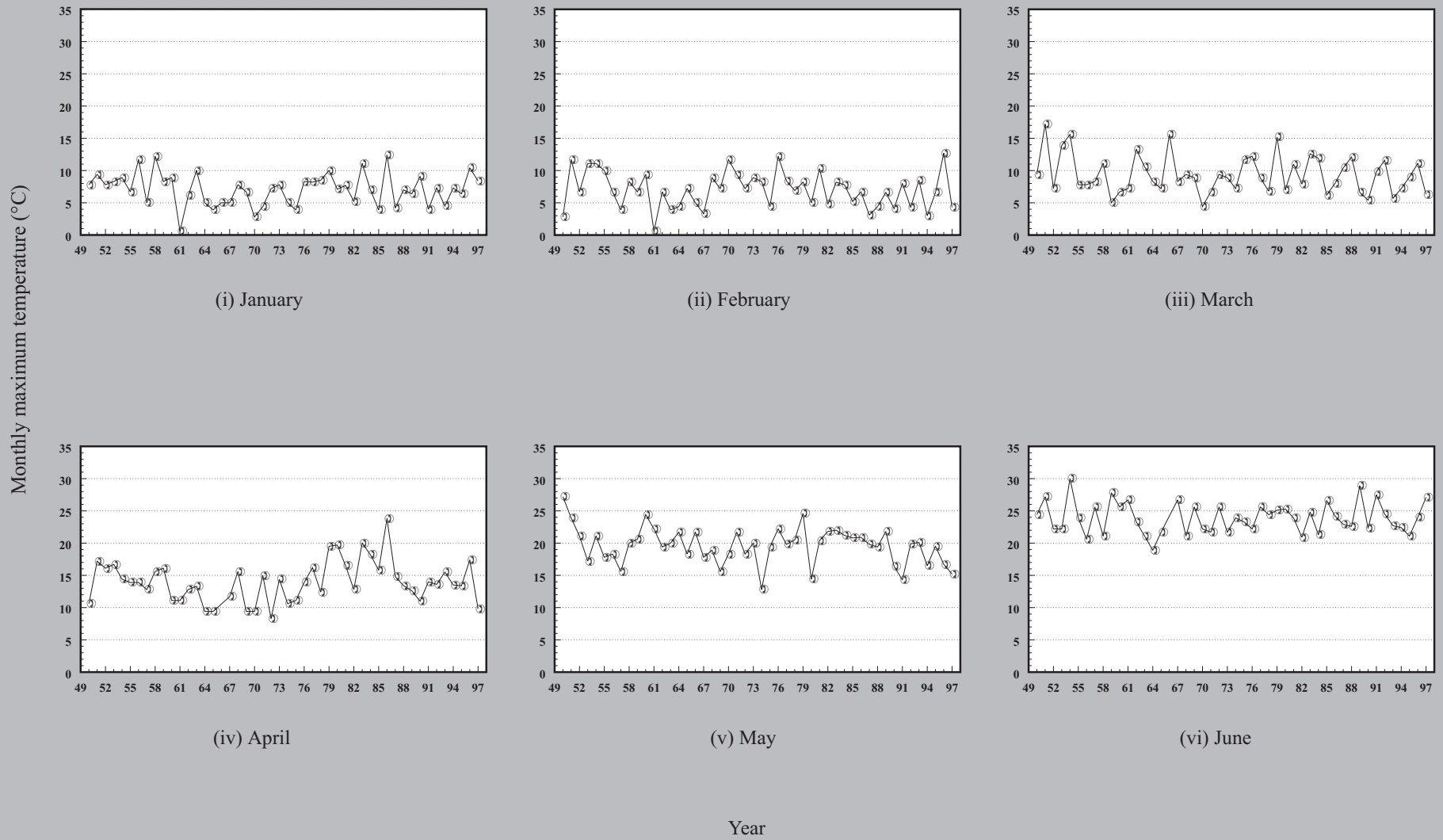


Fig. 2A-28a. Monthly maximum temperature (°C) for Stephenville 1950 - 1997. (missing data may not allow estimation for some years)

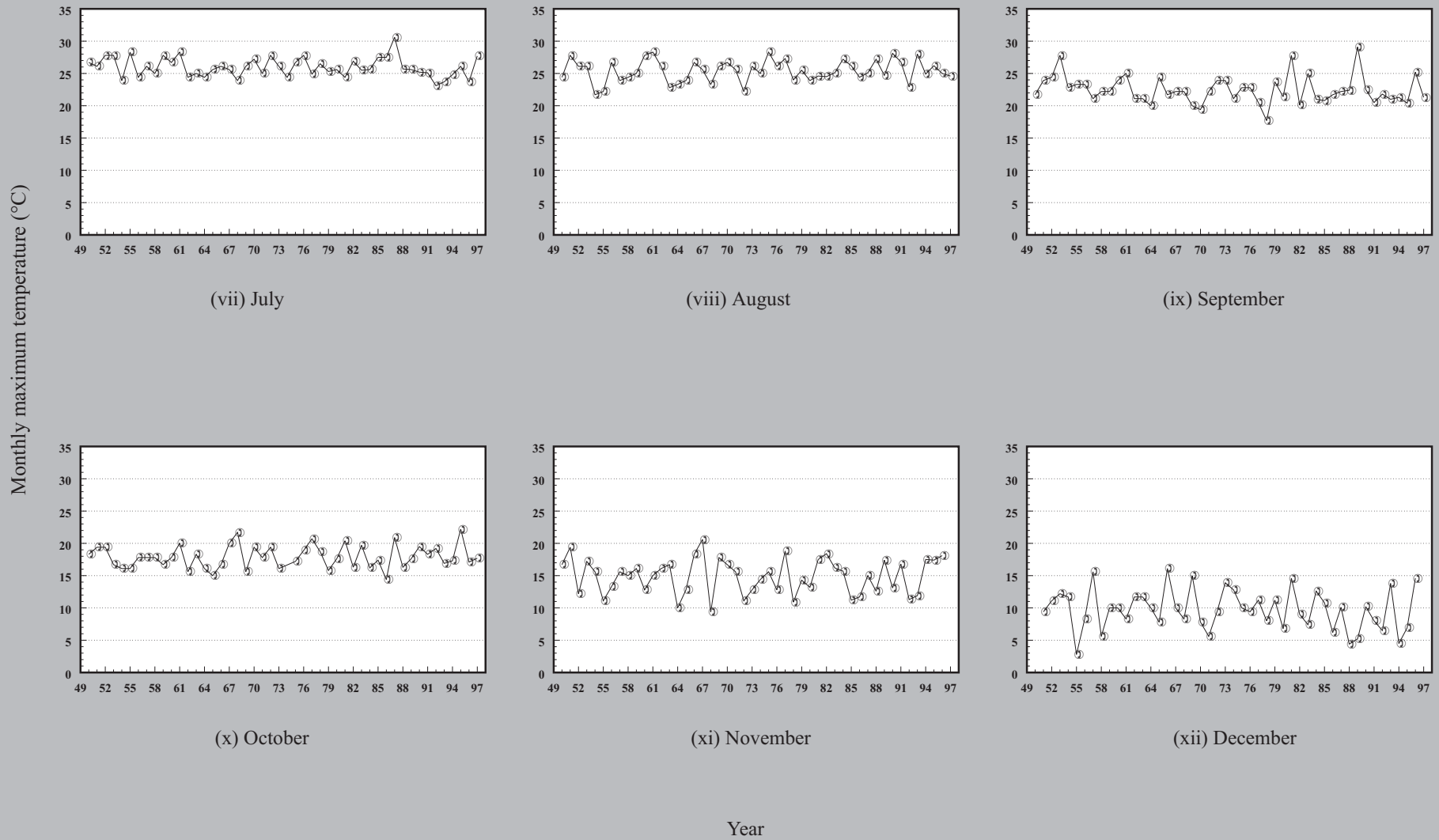


Fig. 2A-28a (con'd). Monthly maximum temperature (°C) for Stephenville 1950 - 1997. (missing data may not allow estimation for some years)

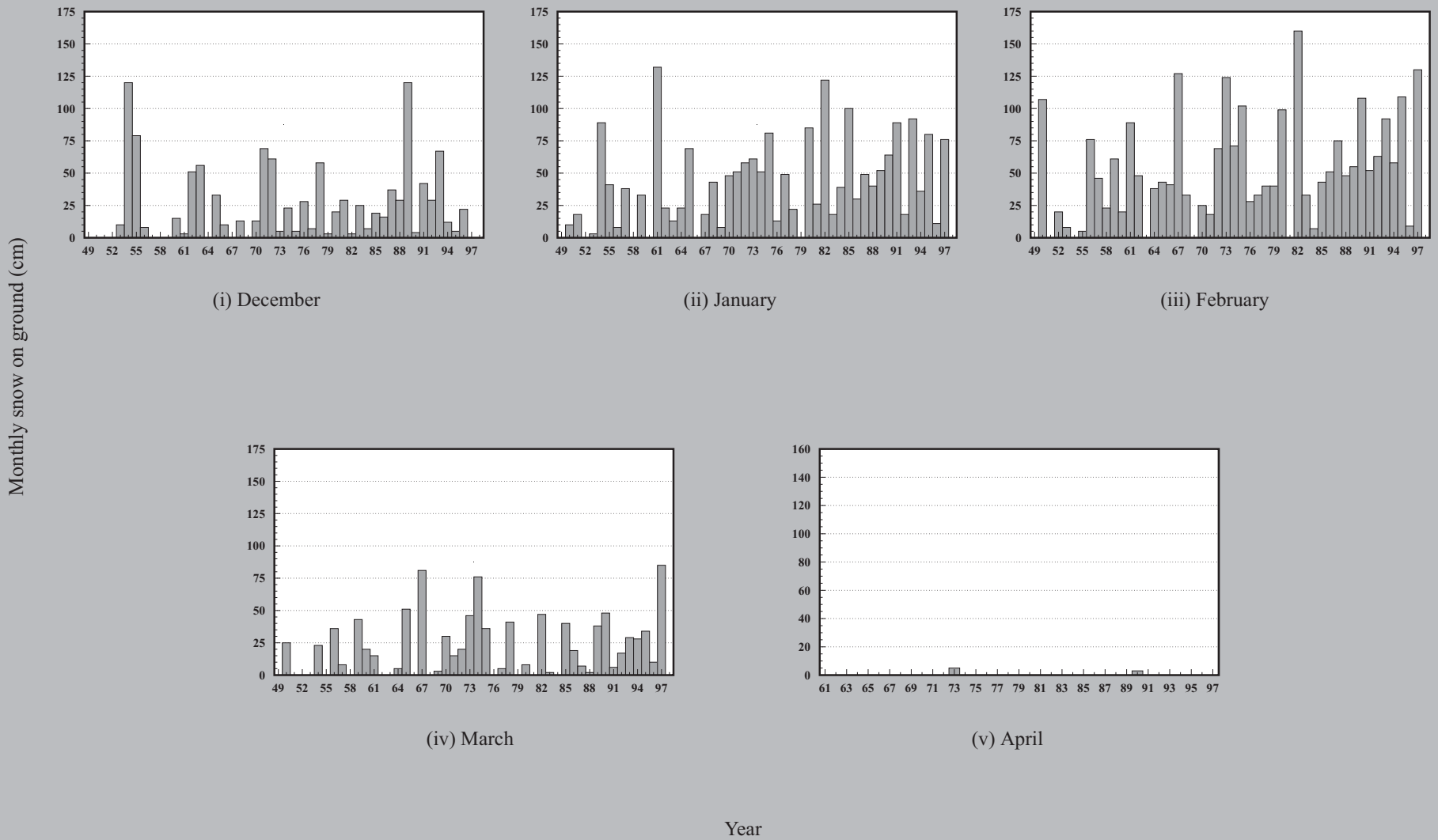
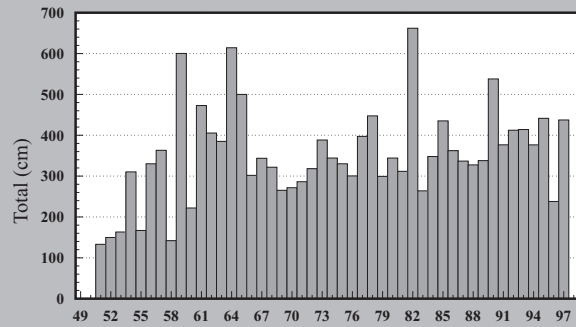
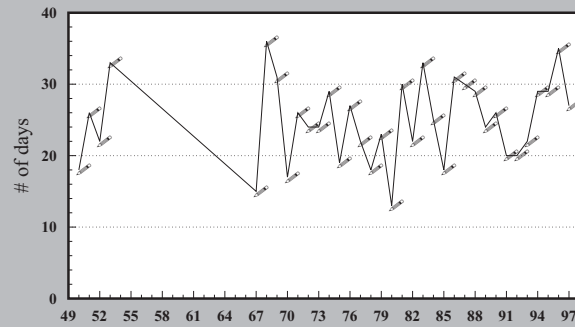


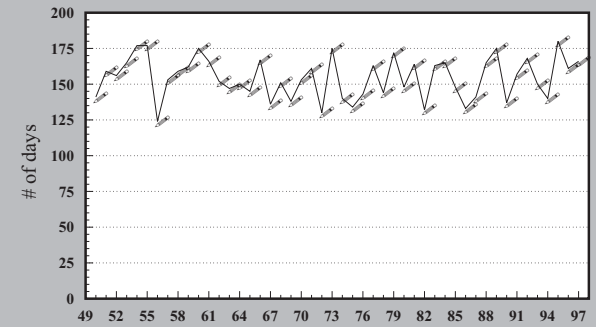
Fig. 2A-28b. Snow depth (cm) on ground on the last day of the month for Stephenville, 1950 - 1997. (missing data may not allow estimation for some years)



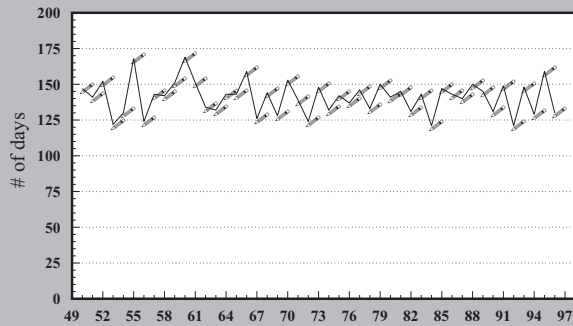
c. Snowfall



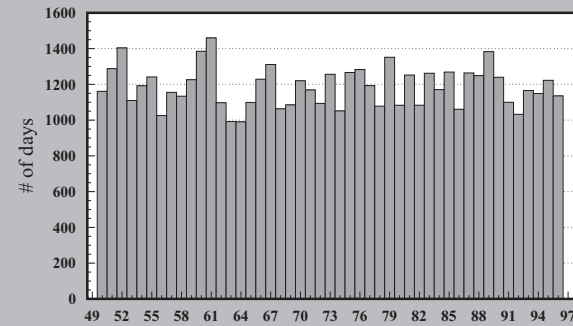
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-28c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Stephenville, 1950 - 1997. (missing data may not allow estimation for some years)

Table 2A-28a. Monthly maximum temperature (°C) for Swift Current.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1984	-	11.0	11.0	14.0	20.0	21.5	26.5	28.5	25.5	16.0	14.5	13.0
1985	4.5	6.0	6.0	11.5	19.0	24.5	25.5	26.5	24.0	17.0	11.0	10.0
1986	11.0	6.0	8.0	21.0	23.0	22.0	28.5	25.0	21.0	15.0	12.5	6.0
1987	6.0	5.5	8.0	16.0	21.0	20.0	28.0	27.0	21.5	19.5	15.5	12.5
1988	7.0	7.5	14.0	16.0	24.0	22.5	25.5	28.5	24.0	19.5	15.0	7.5
1989	7.0	9.0	6.0	12.5	23.0	25.0	25.5	27.0	27.5	18.0	16.0	5.5
1990	10.5	9.0	8.0	16.5	17.0	23.0	28.5	30.5	23.5	21.0	14.0	12.5
1991	5.0	8.5	9.0	16.0	17.5	23.5	27.0	25.0	23.0	20.0	14.0	9.5
1992	8.0	6.0	8.5	12.5	20.5	22.5	24.0	25.5	24.5	17.5	13.5	10.0
1993	10.0	10.5	10.0	14.5	18.0	22.0	23.0	25.5	22.5	17.5	14.0	12.5
1994	7.5	4.0	9.0	14.5	15.5	23.5	26.5	26.5	21.5	21.5	17.5	5.5
1995	8.5	7.5	9.0	14.5	18.0	22.5	26.0	29.5	24.5	18.0	13.5	6.0
1996	10.5	15.0	12.0	18.0	18.0	24.5	27.0	30.5	26.5	17.5	14.0	12.0
1997	7.5	6.0	6.0	9.5	18.0	23.5	27.0	27.0	24.0	-	-	-

Table 2A-28b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Swift Current.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1984	44	-	0	-	0	18	0
1985	27	144.4	25	18	20	7	0
1986	48	213.9	2	0	18	5	0
1987	38	173.2	35	37	44	0	0
1988	49	144.6	25	26	0	0	0
1989	31	221.6	11	20	18	49	0
1990	39	175.8	0	30	35	0	0
1991	32	200.6	28	30	45	0	0
1992	35	215.8	19	4	35	0	0
1993	39	162.2	24	14	8	0	0
1994	42	248.6	21	0	70	13	0
1995	41	241.8	0	37	32	1	0
1996	49	149.0	0	0	2	1	0
1997	26	239.0	-	6	30	15	40

Table 2A-28c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Swift Current.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1984	78	1182.5	151
1985	107	1163.4	149
1986	108	953.2	125
1987	107	1157.7	145
1988	108	1124.2	128
1989	100	1275.4	129
1990	107	1246.0	148
1991	118	1030.7	137
1992	110	1110.7	147
1993	94	1068.0	148
1994	88	1229.7	138
1995	109	1089.8	152
1996	84	1102.3	136

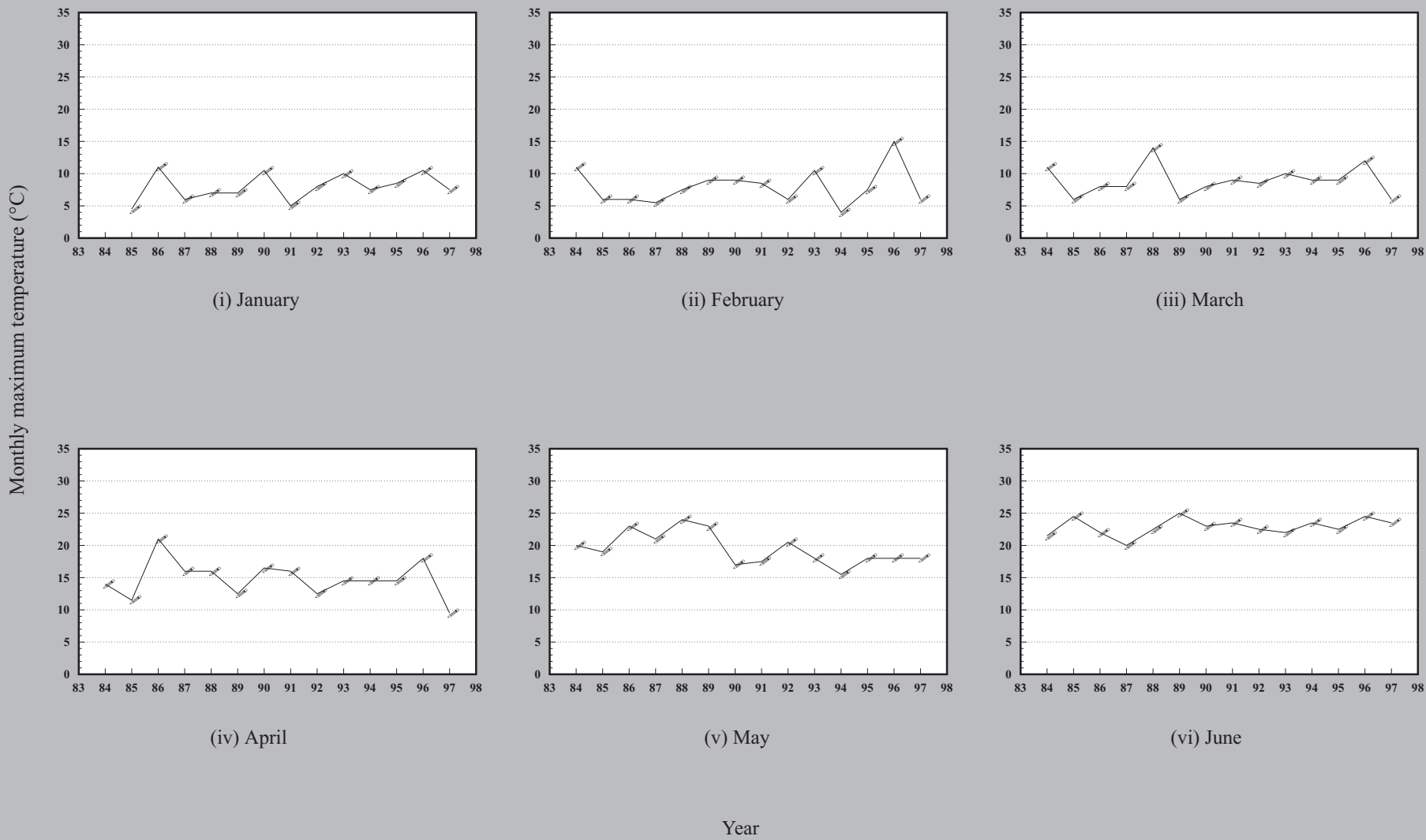


Fig. 2A-29a. Monthly maximum temperature (°C) for Swift Current, 1984 - 1997. (missing data may not allow estimation for some years)

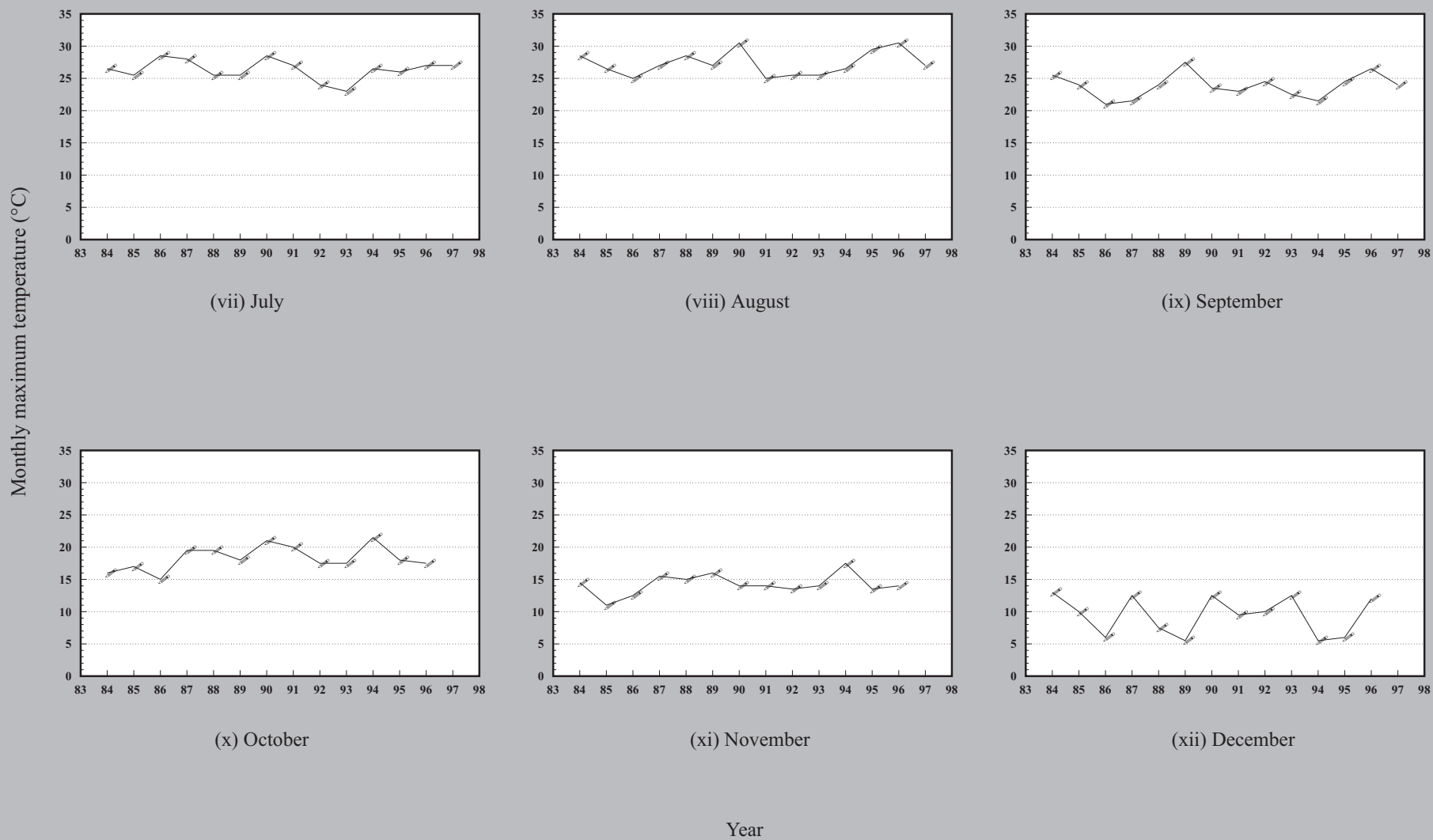


Fig. 2A-29a (con'd). Monthly maximum temperature (°C) for Swift Current, 1984 - 1997. (missing data may not allow estimation for some years)

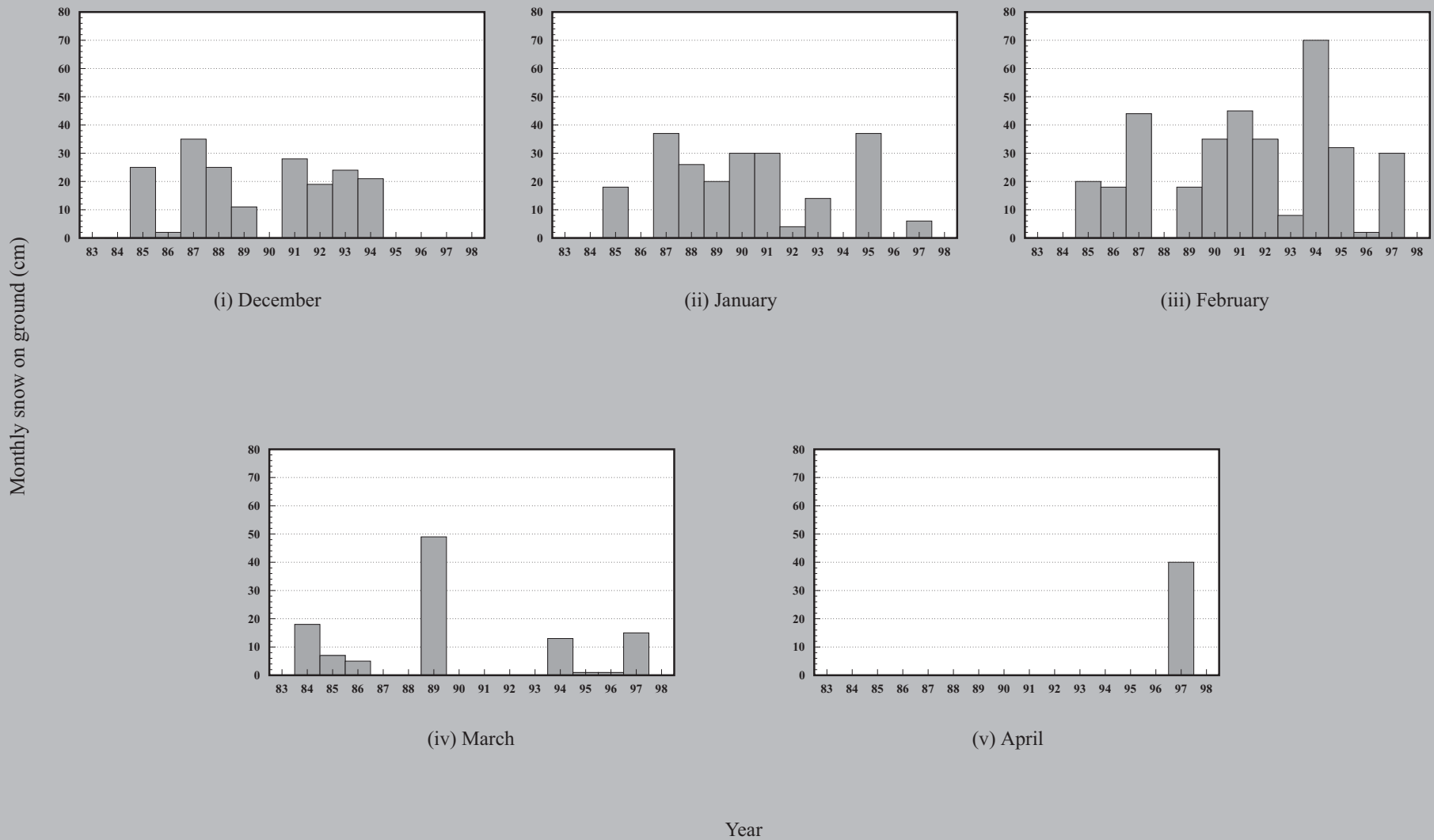
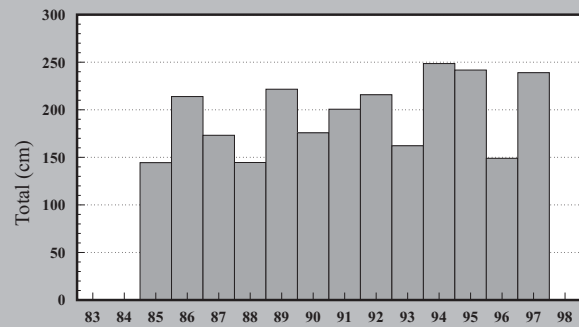
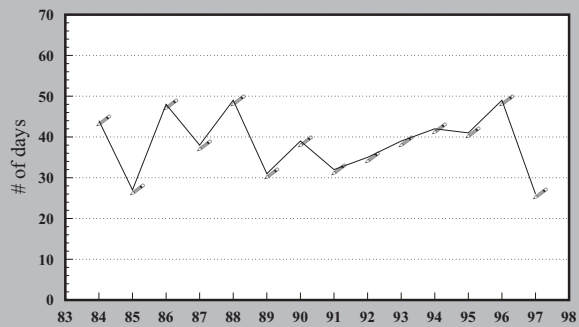


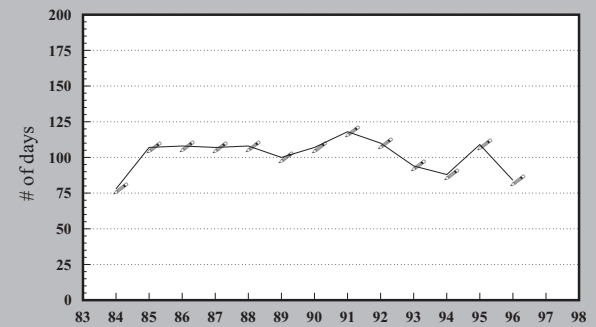
Fig. 2A-29b. Snow depth (cm) on ground on the last day of the month for Swift Current, 1984 - 1997. (missing data may not allow estimation for some years)



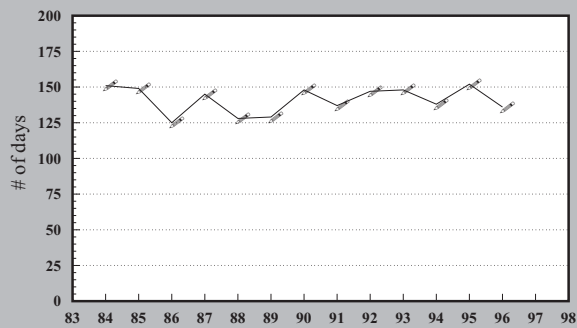
c. Snowfall



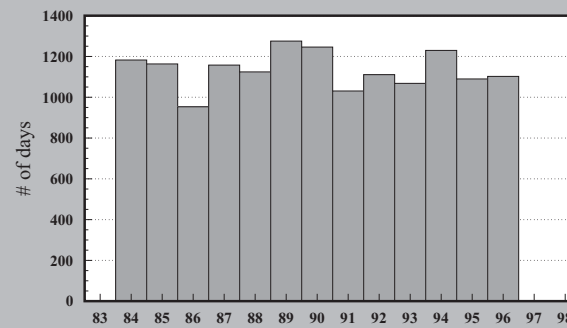
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

Fig. 2A-29c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Swift Current, 1984 - 1997. (missing data may not allow estimation for some years)

Table 2A-29a. Monthly maximum temperature (°C) for Terra Nova National Park.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1962	-	-	11.7	12.8	20.6	-	27.8	28.9	25.0	-	-	-
1963	11.7	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	13.3	25.0	23.3	30.0	24.4	23.3	17.2	8.9	9.4
1965	7.8	6.1	6.1	11.1	23.9	27.8	28.3	27.8	23.3	17.2	13.9	8.9
1966	-	4.4	10.0	13.9	23.3	27.2	27.2	27.8	24.4	16.7	15.6	14.4
1967	9.4	7.2	5.6	7.8	15.6	32.2	32.2	30.0	22.8	-	19.4	12.8
1968	7.2	6.1	11.7	17.2	23.9	23.3	31.1	28.3	24.4	20.0	12.8	7.8
1969	8.3	6.7	8.9	15.0	20.0	27.2	28.3	26.1	21.1	20.6	17.2	16.1
1970	2.8	11.1	7.8	13.9	23.3	26.1	31.1	31.1	23.9	20.0	15.6	10.6
1971	6.7	9.4	10.0	15.0	25.0	28.3	30.0	28.9	23.9	17.8	15.6	7.2
1972	7.2	6.7	11.7	10.0	28.3	26.1	28.3	26.7	24.4	21.1	7.2	7.8
1973	4.4	8.3	8.9	12.8	21.1	27.2	30.0	26.1	23.9	20.0	11.7	12.2
1974	3.3	5.6	6.7	10.6	14.4	28.3	26.1	27.8	24.4	16.7	10.6	12.8
1975	2.2	3.9	6.7	11.1	-	27.2	30.6	27.8	21.1	14.4	10.0	8.9
1976	-	-	15.6	12.8	22.2	32.2	30.0	31.1	22.2	23.3	14.4	8.9
1977	-	-	-	15.6	-	25.6	-	-	-	-	-	12.0
1978	10.0	-	-	-	-	26.7	28.9	-	23.0	19.0	11.5	6.0
1979	11.0	5.5	16.5	17.0	-	28.0	29.5	31.0	22.0	18.0	16.5	10.5
1980	3.5	6.0	6.5	13.0	22.0	26.5	29.0	23.5	22.0	-	12.0	-
1981	8.0	11.5	8.0	13.5	26.0	25.0	33.0	29.0	24.0	18.5	15.5	11.5
1982	3.5	5.0	10.0	19.0	18.5	22.0	30.0	28.0	27.5	17.0	16.0	8.0
1983	12.5	7.0	10.0	21.0	20.0	28.0	30.5	27.0	26.0	20.0	14.0	8.0
1984	8.0	11.5	15.0	11.0	24.0	25.5	29.5	28.5	28.5	14.5	17.0	12.0
1985	4.0	8.0	5.0	10.5	21.0	28.5	31.0	29.0	23.5	16.0	11.0	8.5
1986	10.5	6.5	10.5	23.0	26.0	27.0	28.0	28.0	20.5	14.5	8.5	3.5
1987	5.0	4.0	8.0	17.0	21.5	26.5	30.5	28.5	22.5	19.5	15.0	10.5
1988	7.0	7.0	12.0	12.5	28.5	30.0	29.0	30.0	24.0	21.5	14.5	6.0
1989	6.0	7.0	7.0	14.0	24.0	27.0	29.5	30.0	26.0	18.5	17.0	4.0
1990	10.0	5.5	7.0	16.0	23.0	29.0	29.5	29.0	24.5	21.0	13.0	11.5
1991	3.5	10.5	8.0	12.5	20.5	24.5	31.0	30.0	24.0	19.5	15.5	9.5

Table 2A-29a (con'd). Monthly maximum temperature (°C) for Terra Nova National Park.

Year	January	February	March	April	May	June	July	August	September	October	November	December
1992	8.0	4.5	12.5	15.0	26.5	24.5	25.5	29.5	26.0	17.0	13.0	9.5
1993	8.5	10.0	-	-	-	28.0	28.5	28.5	25.5	18.0	13.5	11.0
1994	7.5	3.5	8.5	14.0	20.5	28.0	29.5	29.0	23.0	24.0	15.5	4.0
1995	7.5	8.0	8.5	14.5	21.5	26.5	30.5	32.0	24.5	22.0	15.5	5.0
1996	12.5	14.5	11.0	20.0	19.0	26.5	27.5	34.0	28.0	17.5	-	-
Normal	-2.1	-2.5	1.2	5.5	11.7	17.1	21.6	20.7	16.2	10.2	4.9	0.1

Table 2A-29b. Number of days of winter rainfall, total annual snowfall (cm) and snow depth (cm) on ground on the last day of the month for Terra Nova National Park.

Year	Days of Winter Rainfall	Total Annual Snowfall	Snow Depth on Ground				
			December	January	February	March	April
1963	-	-	-	-	-	0	-
1964	-	-	-	-	-	-	-
1965	28	368.3	66	-	-	10	-
1966	16	391.2	-	102	-	-	-
1967	13	420.4	0	-	71	152	-
1968	17	190.5	0	15	0	30	-
1969	30	287.0	0	48	33	-	-
1970	32	189.0	23	46	10	3	-
1971	32	188.7	25	-	-	-	-
1972	16	218.4	38	-	41	20	-
1973	17	223.5	8	30	30	41	5
1974	25	221.1	25	46	76	71	-
1975	17	254.1	-	66	97	-	-
1976	23	248.7	15	-	64	13	-
1977	-	-	0	25	-	-	-
1978	-	-	0	2	-	-	-
1979	35	254.5	0	0	0	0	-
1980	21	218.5	1	21	146	54	-
1981	39	185.6	-	43	0	8	-
1982	18	268.4	4	55	-	-	-
1983	36	301.5	14	30	105	0	-
1984	37	218.1	-	5	10	48	-
1985	25	272.3	31	54	57	43	-
1986	34	311.0	40	0	54	48	-
1987	35	240.4	45	98	113	64	-
1988	35	423.5	52	41	35	37	-
1989	24	354.7	28	64	75	68	-
1990	27	226.5	1	17	50	16	3
1991	28	349.9	33	53	35	-	-
1992	18	336.8	22	3	-	-	-
1993	-	-	24	21	10	-	-
1994	24	396.6	-	17	70	20	-
1995	25	568.5	9	-	-	-	-
1996	36	267.2	-	2	1	0	-
Normal	-	-	19	38	-	35	-

Table 2A-29c. Length of frost free period (days), number of growing degree days, and length of growing season (days) for Terra Nova National Park.

Year	Frost Free Period	Growing Degree Days	Growing Season Length
1964	130	863.6	131
1965	114	1127.6	119
1966	148	1302.4	157
1967	151	1351.3	129
1968	131	939.4	125
1969	140	1093.3	122
1970	137	1065.7	107
1971	141	1279.8	143
1972	120	915.1	113
1973	166	1214.1	137
1974	134	1062.2	120
1975	-	1112.2	109
1976	160	1282.3	155
1977	-	-	-
1978	-	1059.8	123
1979	165	1212.0	142
1980	149	725.4	109
1981	145	1211.9	141
1982	107	962.0	109
1983	109	1197.9	126
1984	102	1056.4	105
1985	123	1125.5	132
1986	116	967.0	118
1987	134	1126.8	131
1988	131	1180.2	126
1989	108	1389.1	132
1990	151	1319.1	137
1991	135	1001.2	131
1992	101	1102.7	133
1993	-	994.2	116
1994	94	1261.0	124
1995	115	1142.2	133
1996	101	1216.7	126

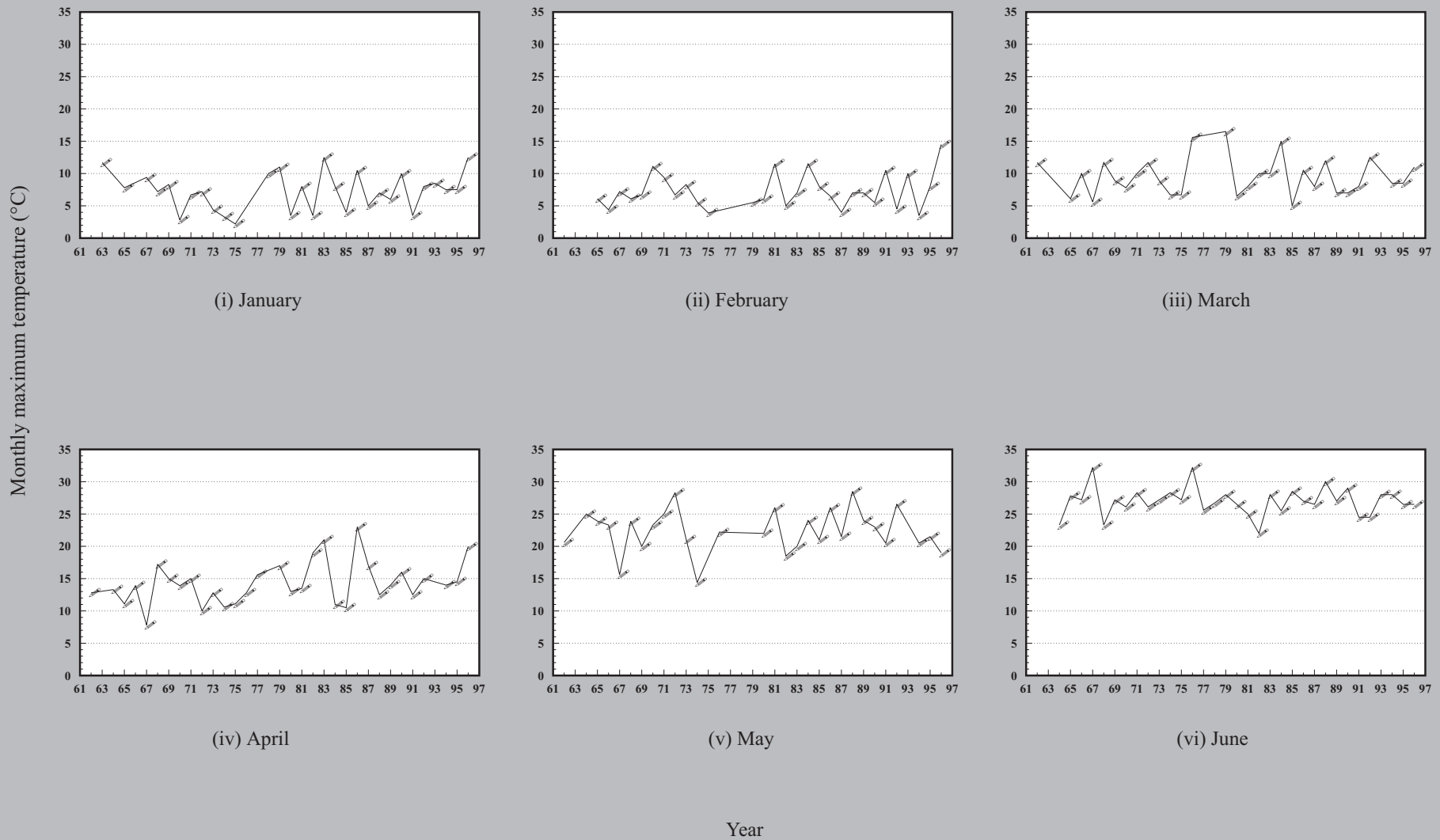


Fig. 2A-30a. Monthly maximum temperature (°C) for Terra Nova National Park, 1962 - 1996. (missing data may not allow estimation for some years)

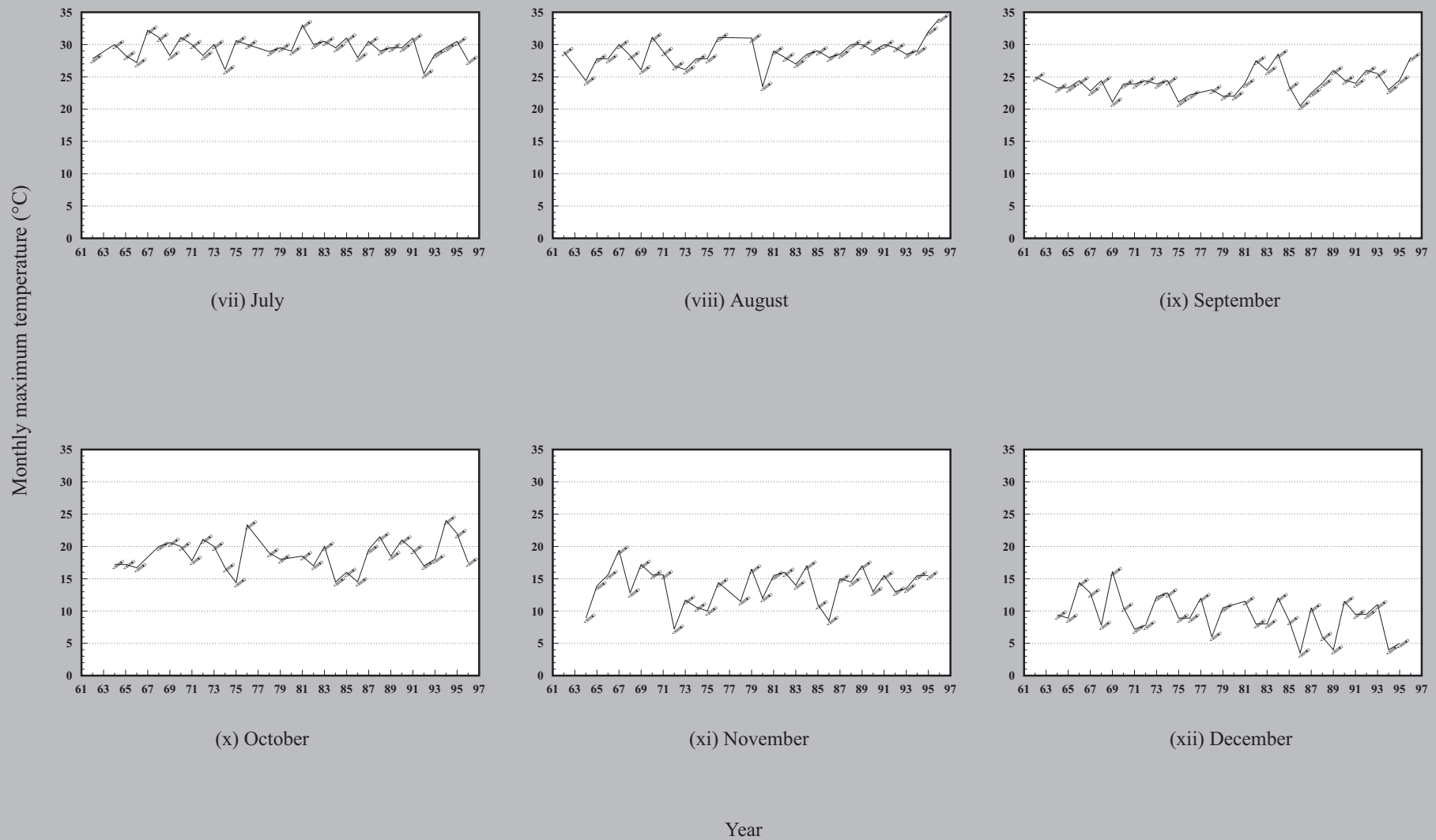


Fig. 2A-30a (con'd). Monthly maximum temperature (°C) for Terra Nova National Park, 1962 - 1996. (missing data may not allow estimation for some years)

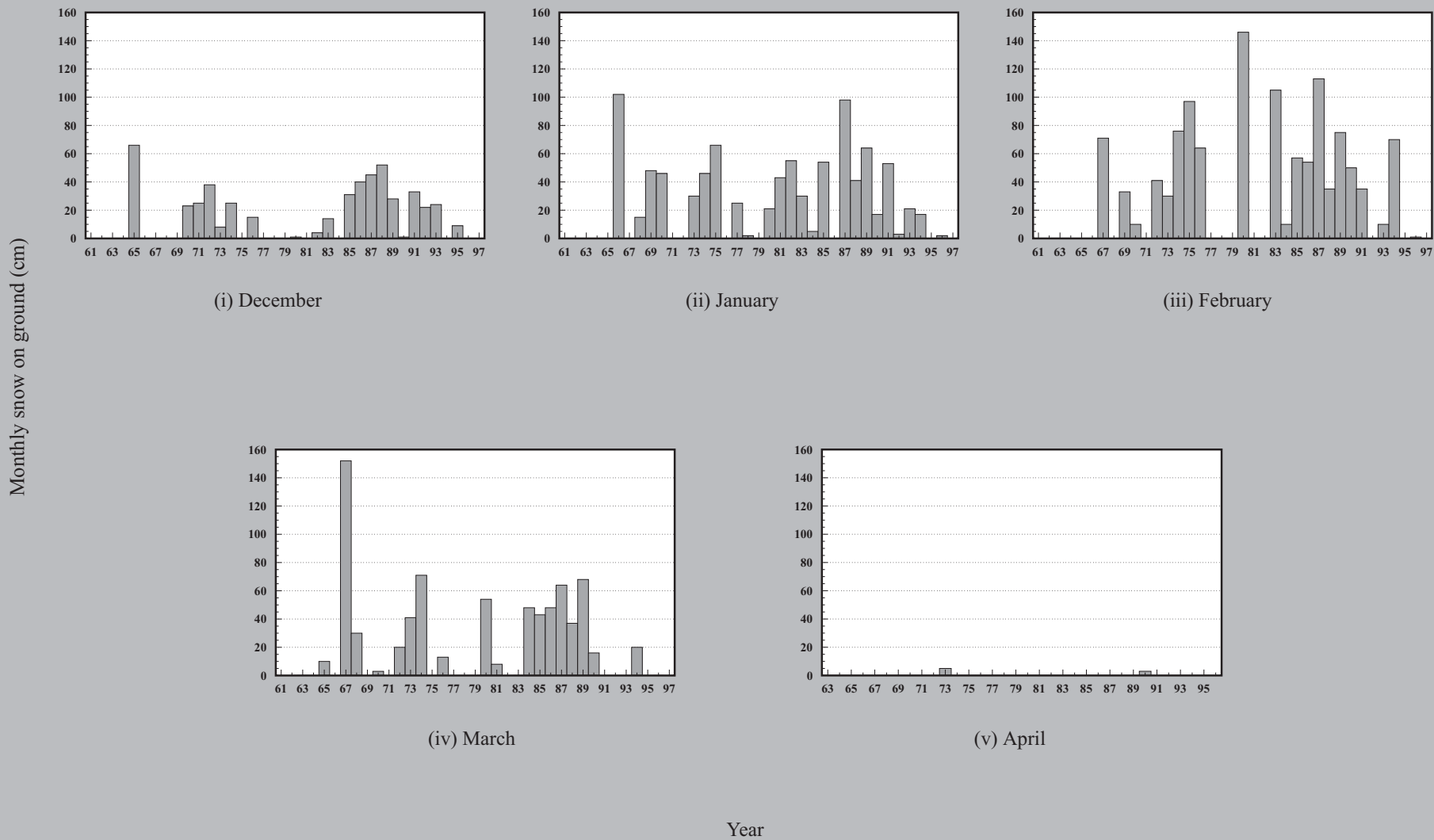
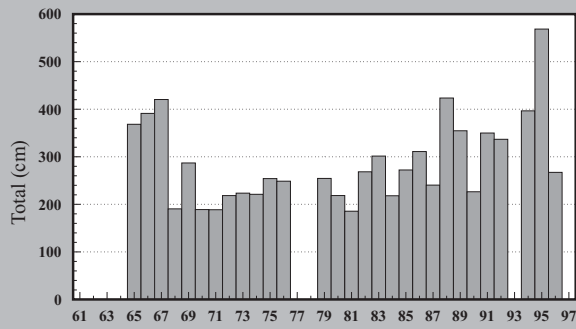
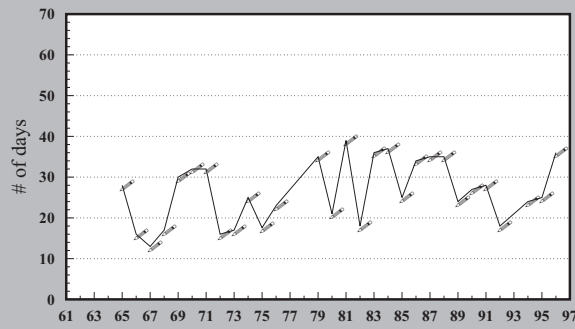


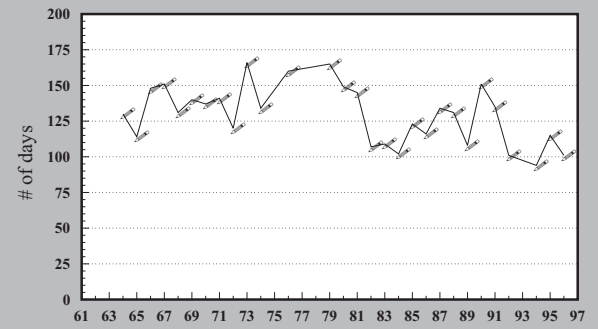
Fig. 11A-30b. Snow depth (cm) on ground on the last day of the month for Terra Nova National Park, 1962 - 1996. (missing data may not allow estimation for some years)



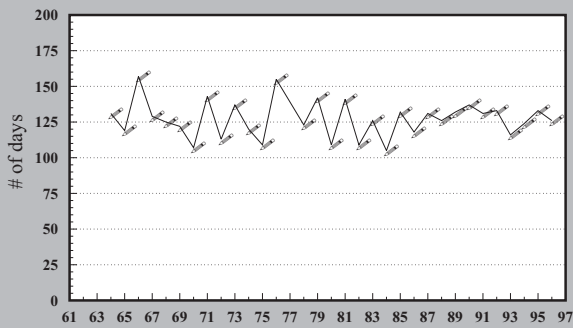
c. Snowfall



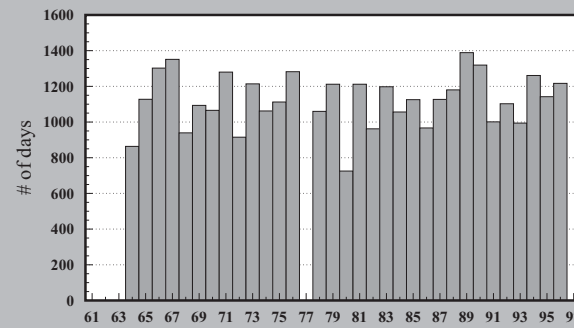
d. Winter rainfall



e. Frost-free period



f. Growing season length



g. Growing degree days

Year

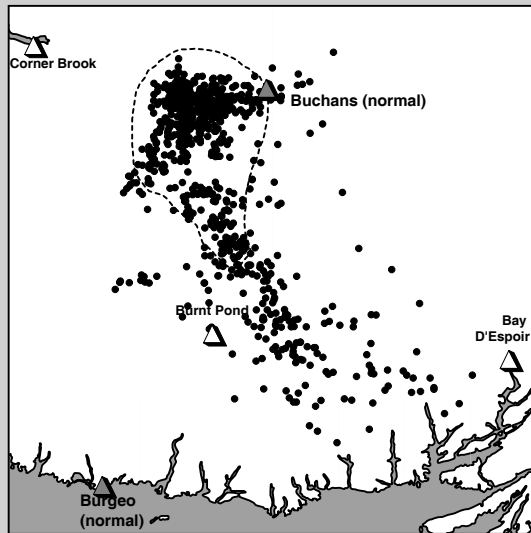
Fig. 11A-30c. Total annual snowfall (cm), d. number of days of winter rainfall, e. length of frost-free period (days), f. length of growing season (days), and g. growing degree days for Terra Nova National Park, 1962 - 1996. (missing data may not allow estimation for some years)

**Section 2B:
Weather Station
Locations Relative to
Herd Distribution
(Adult Female and Calf
Cohorts Only)**

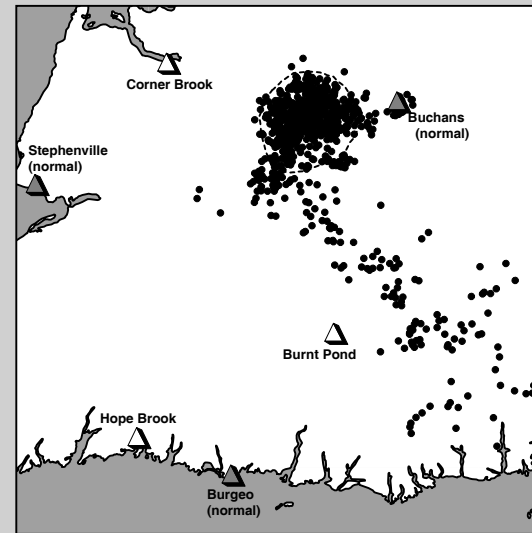


Caribou Herds

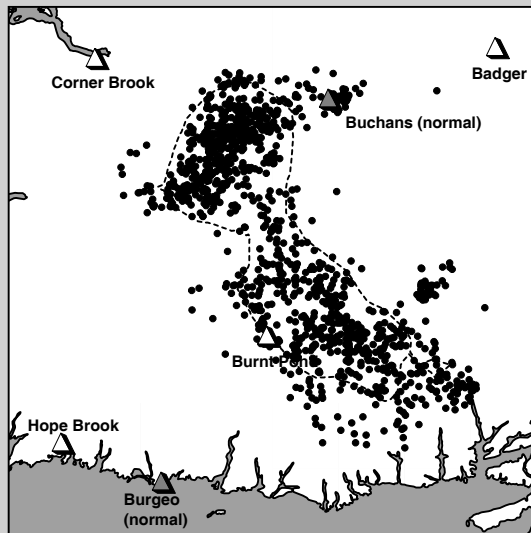
- Buchans (BU)**
- Corner Brook Lakes (CB)**
- Grey River (GR)**
- Gros Morne (GM)**
- La Poile (LP)**
- Middle Ridge (MR)**
- Mount Peyton (MP)**
- Pot Hill (PH)**
- Sandy Lake (SL)**



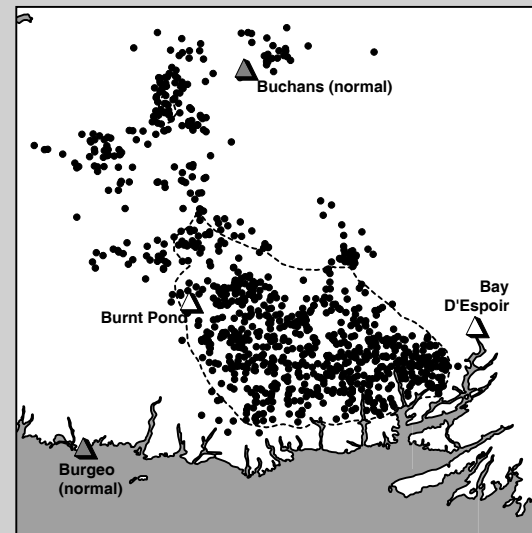
(i) Spring



(ii) Summer

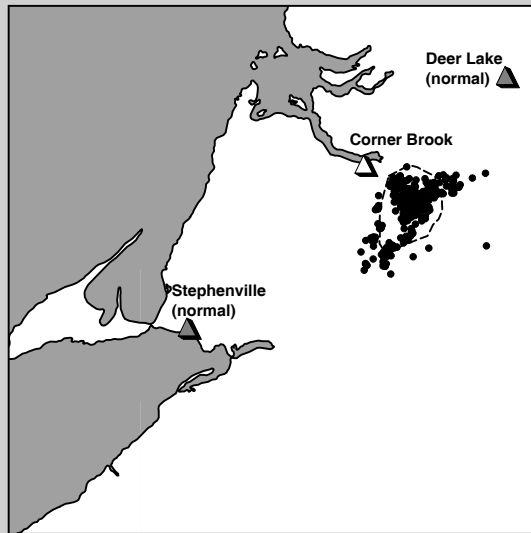


(iii) Fall

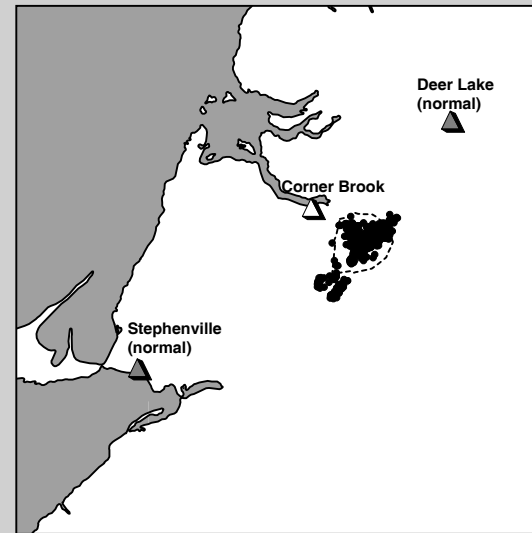


(iv) Winter

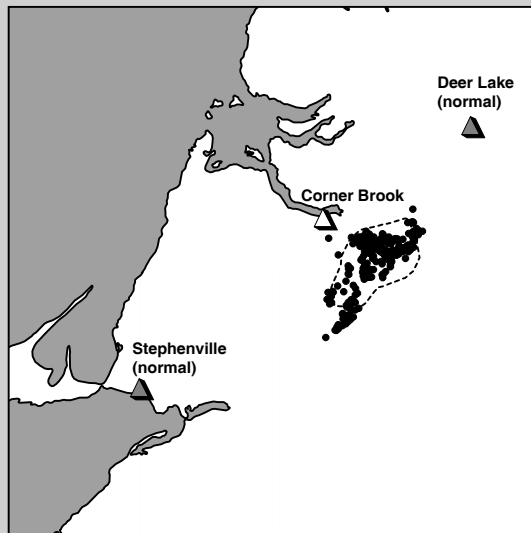
Fig. 2B-1. Locations and 75% harmonic mean home ranges (----) for adult female caribou in the Buchans Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



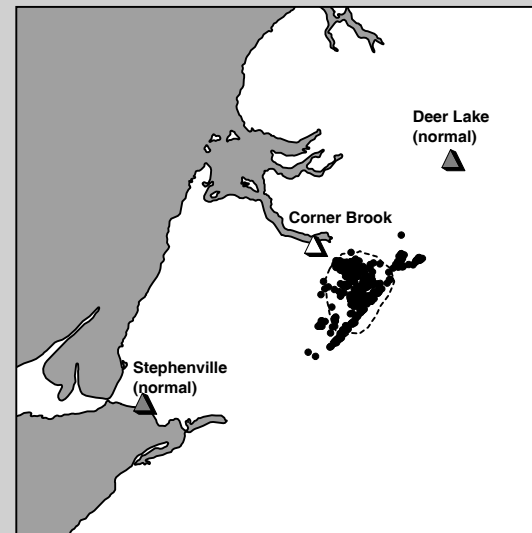
(i) Spring



(ii) Summer

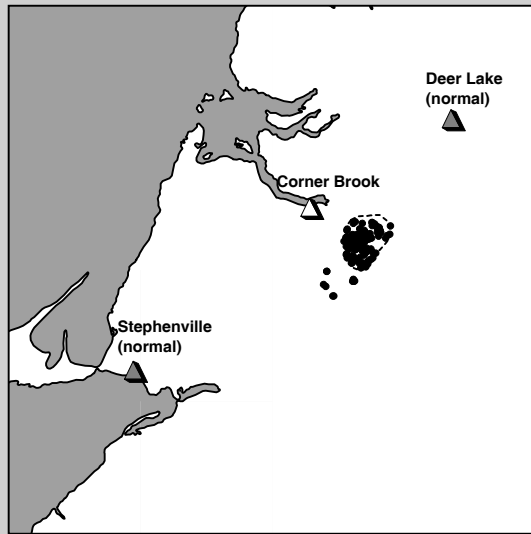


(iii) Fall

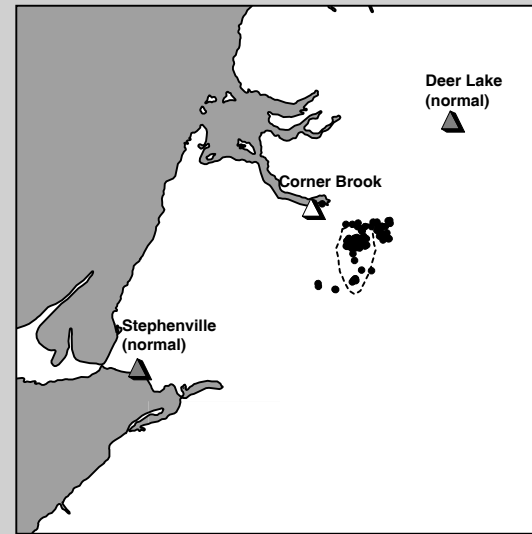


(iv) Winter

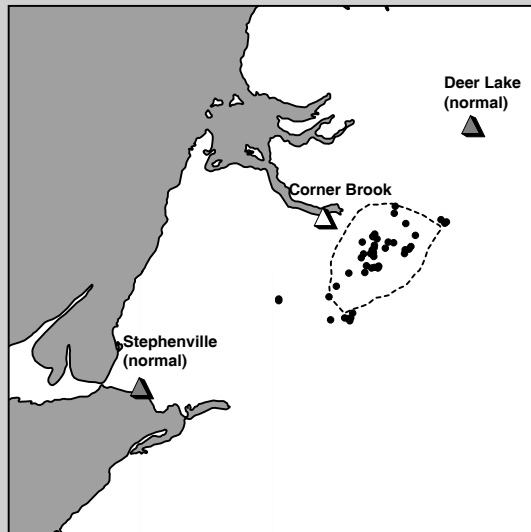
Fig. 2B-2a. Locations and 75% harmonic mean home ranges (----) for adult female caribou in the Corner Brook Lakes Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



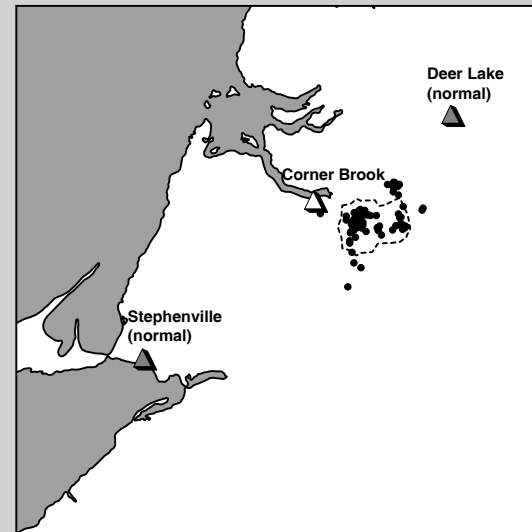
(i) Spring



(ii) Summer

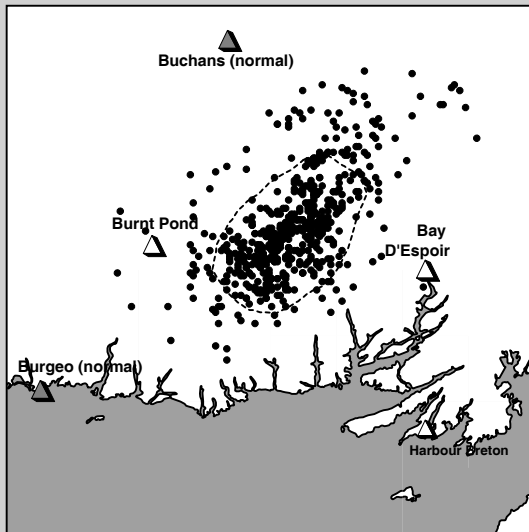


(iii) Fall

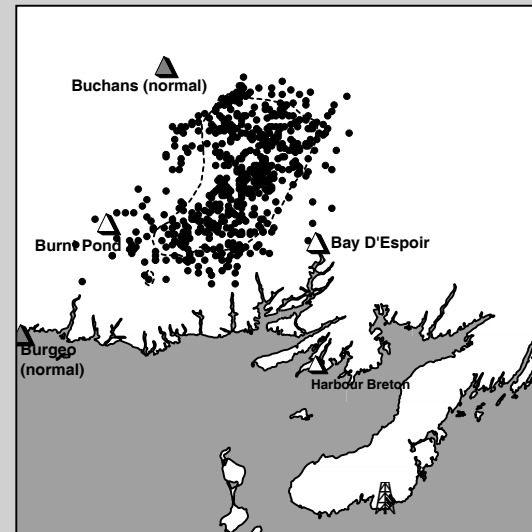


(iv) Winter

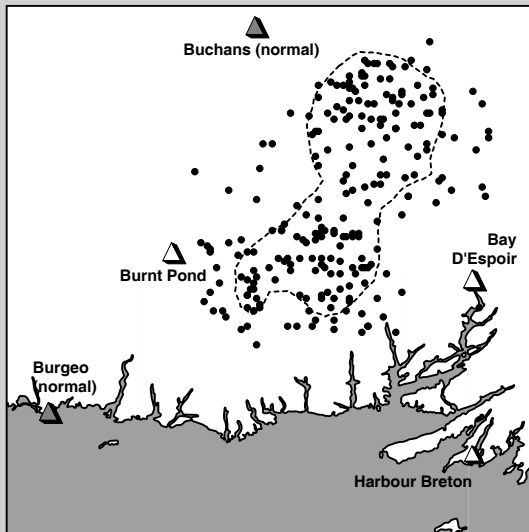
Fig. 2B-2b. Locations and 75% harmonic mean home ranges (----) for caribou calves in the Corner Brook Lakes Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



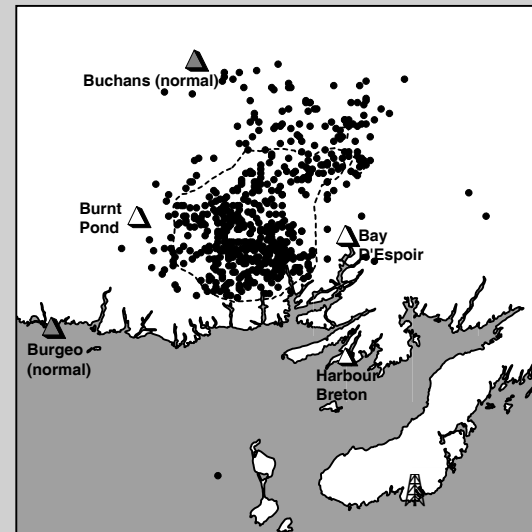
(i) Spring



(ii) Summer

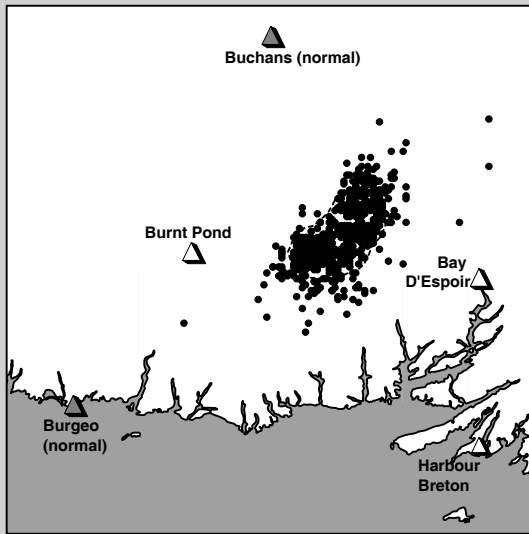


(iii) Fall

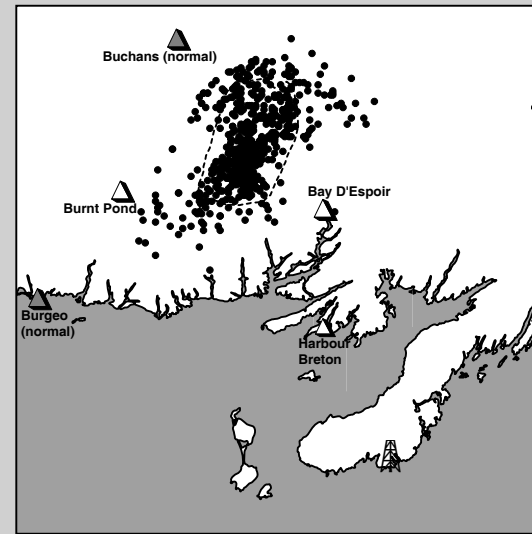


(iv) Winter

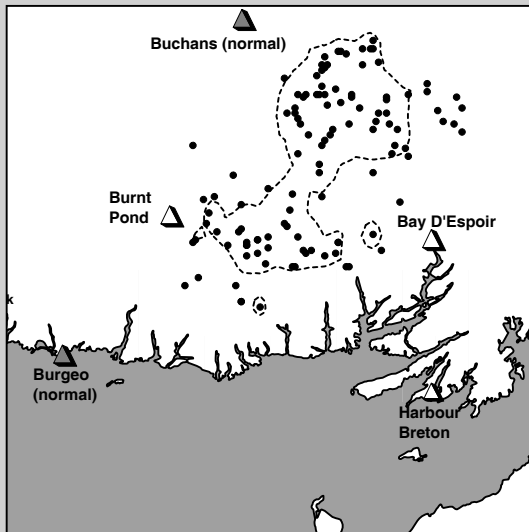
Fig. 2B-3a. Locations and 75% harmonic mean home ranges (----) for adult female caribou in the Grey River Herd by season. Weather stations are identified for closest datasets (△) and closest dataset including normals (▲).



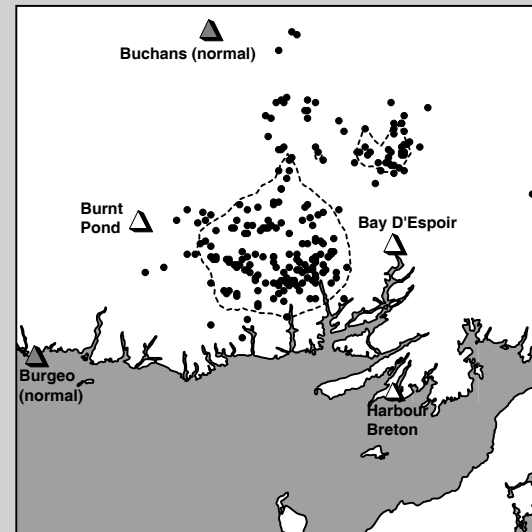
(i) Spring



(ii) Summer

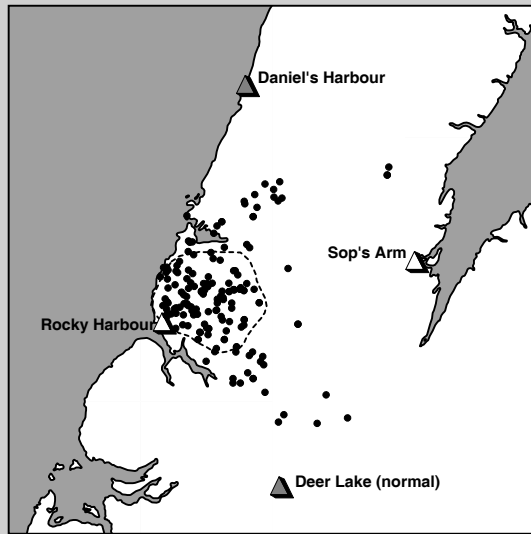


(iii) Fall

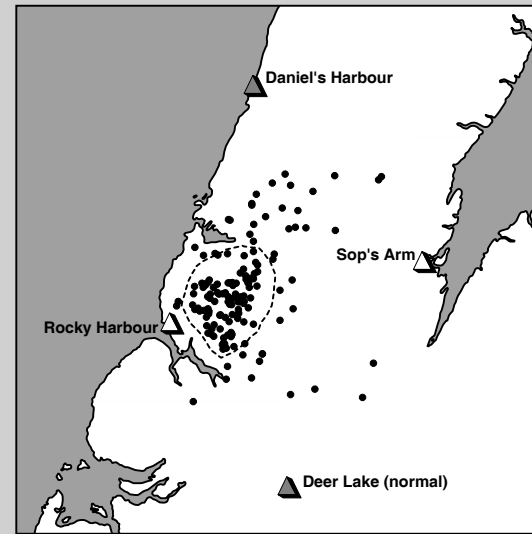


(iv) Winter

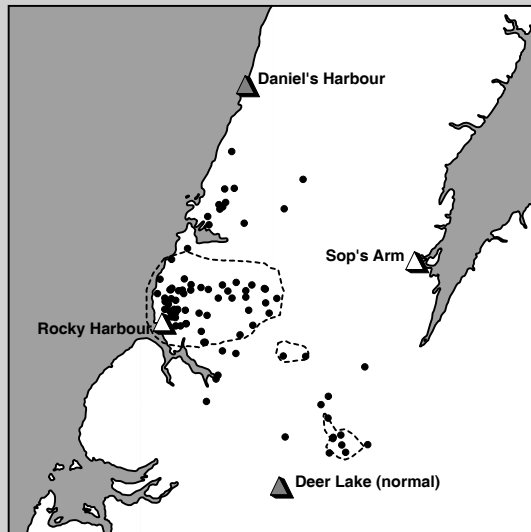
Fig. 2B-3b. Locations and 75% harmonic mean home ranges (----) for caribou calves in the Grey River Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



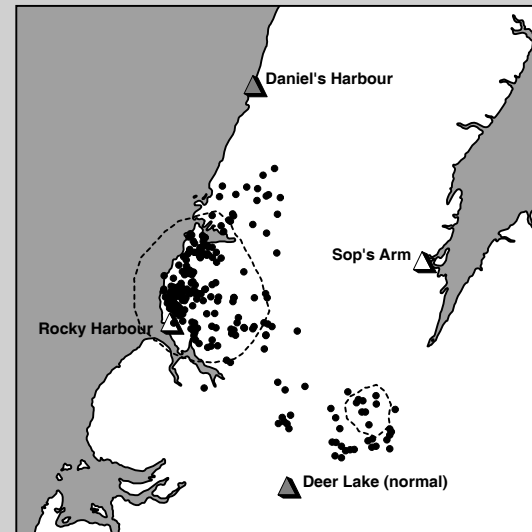
(i) Spring



(ii) Summer

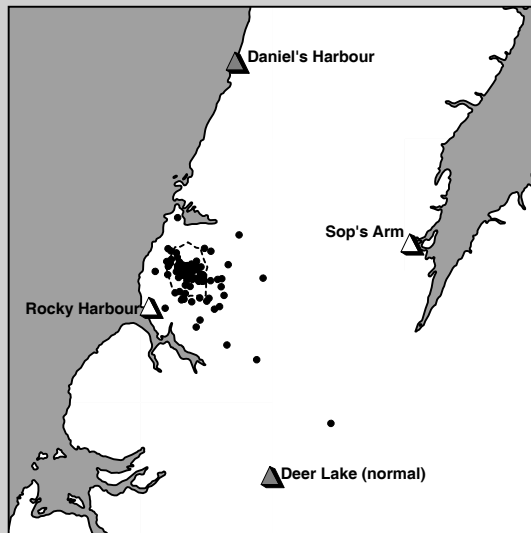


(iii) Fall

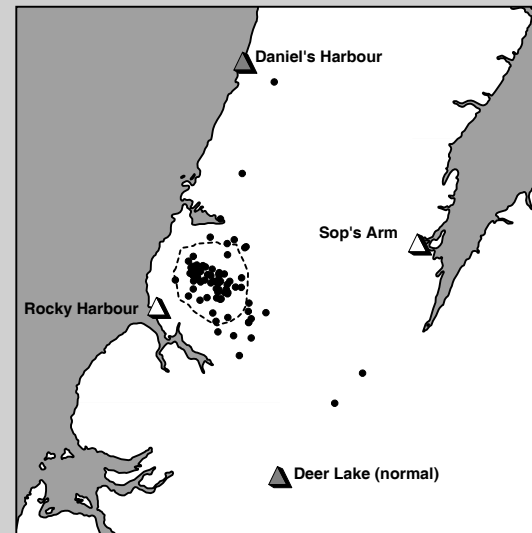


(iv) Winter

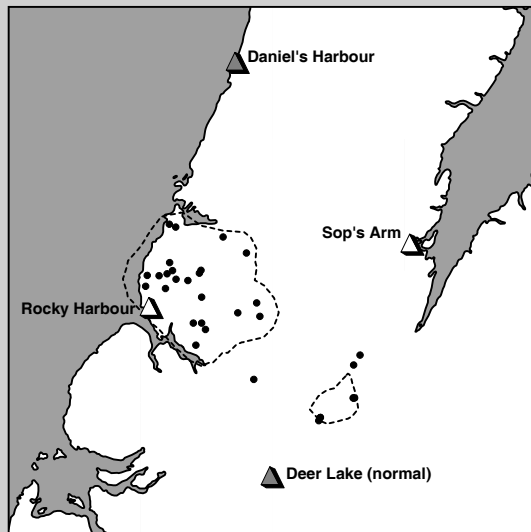
Fig. 2B-4a. Locations and 75% harmonic mean home ranges (----) for adult female caribou in the Gros Morne Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



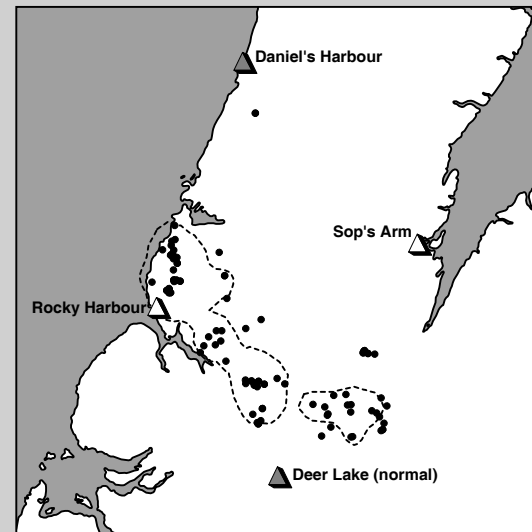
(i) Spring



(ii) Summer

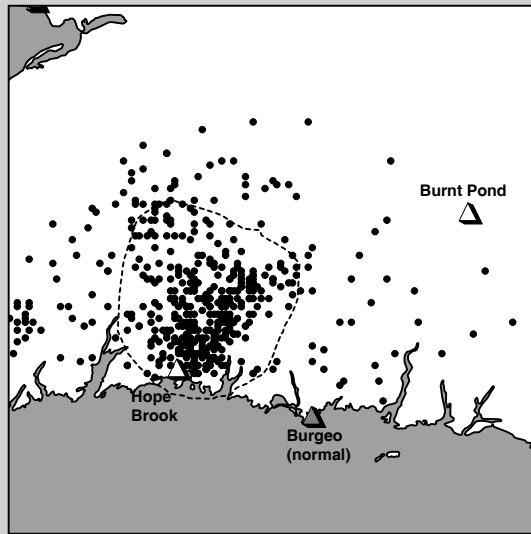


(iii) Fall

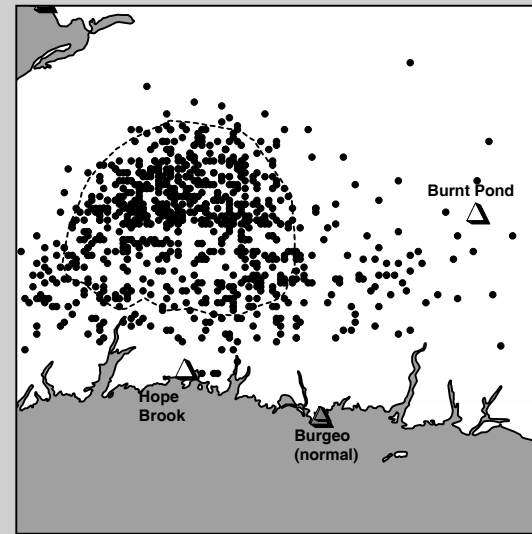


(iv) Winter

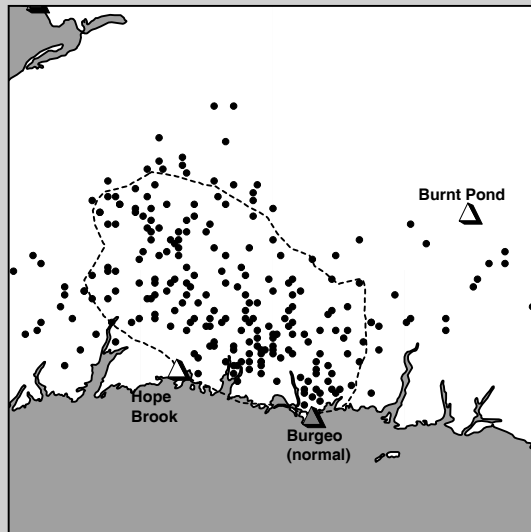
Fig. 2B-4b. Locations and 75% harmonic mean home ranges (----) for caribou calves in the Gros Morne Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



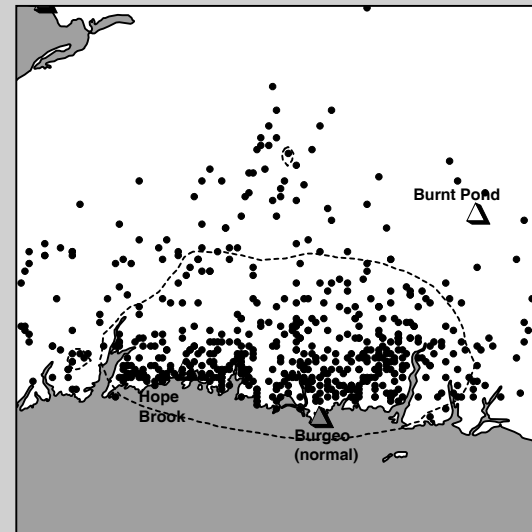
(i) Spring



(ii) Summer

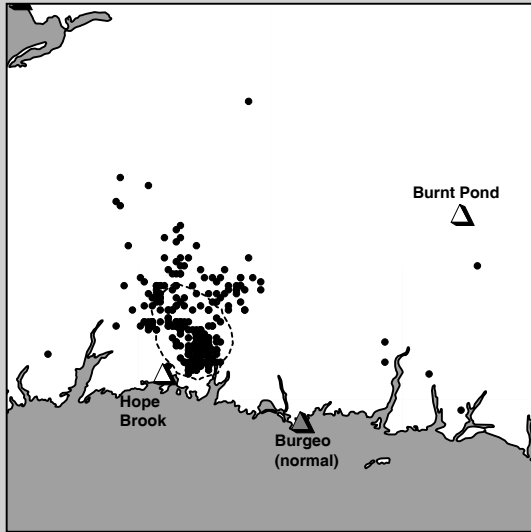


(iii) Fall

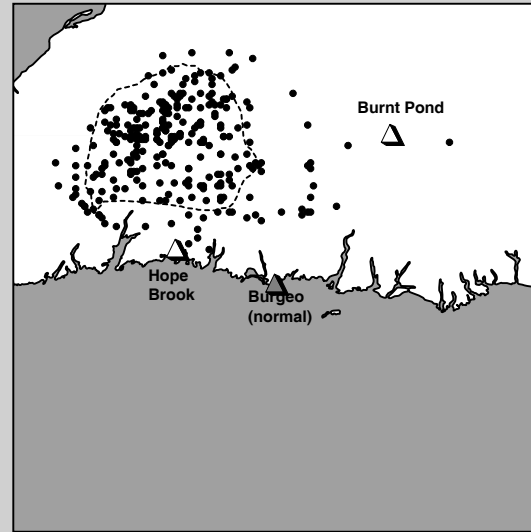


(iv) Winter

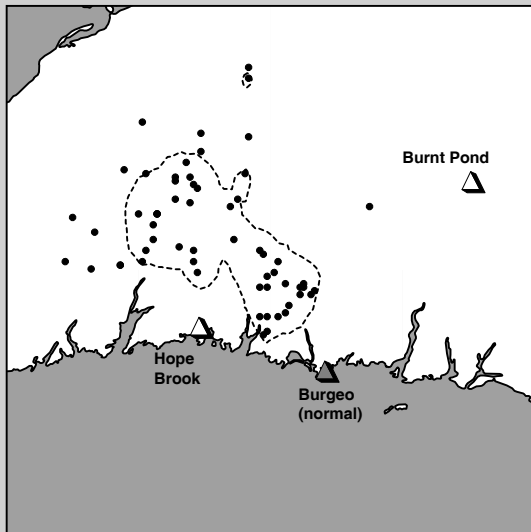
Fig. 2B-5a. Locations and 75% harmonic mean home ranges (----) for adult female caribou in the La Poile Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



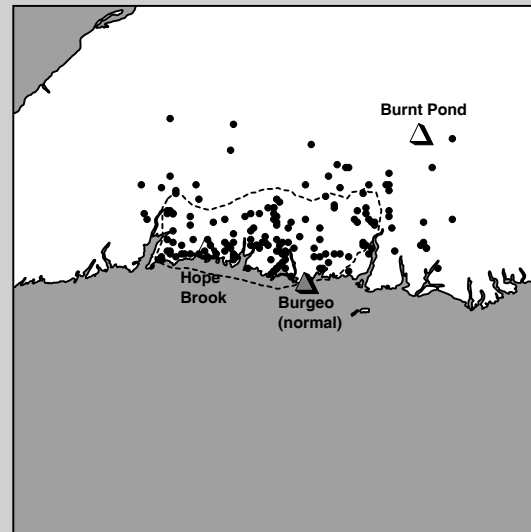
(i) Spring



(ii) Summer

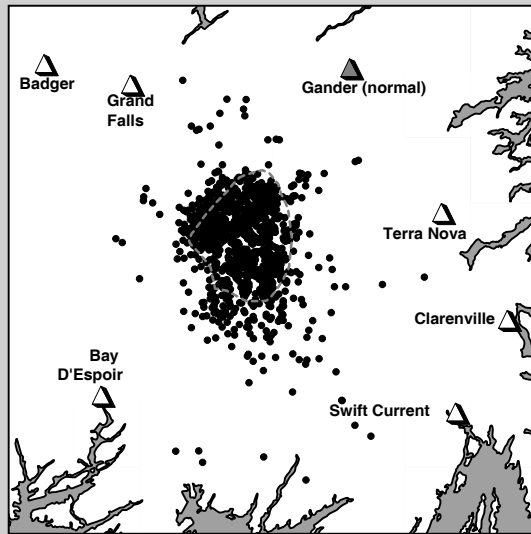


(iii) Fall

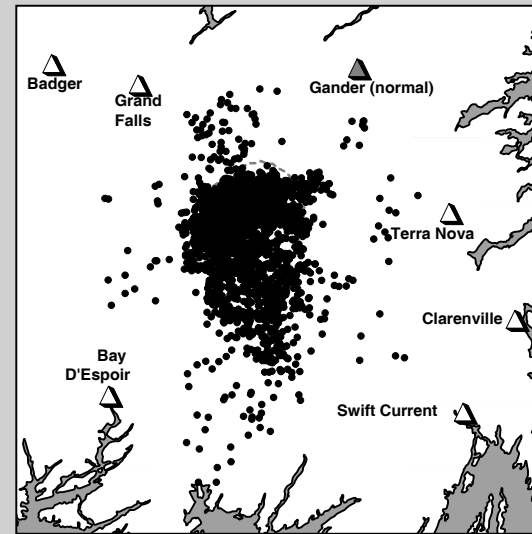


(iv) Winter

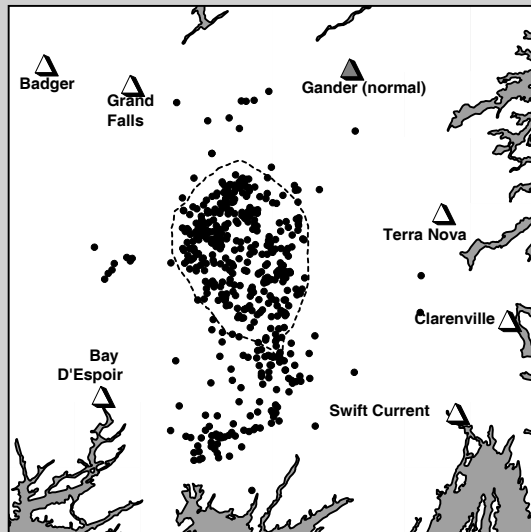
Fig. 2B-5b. Locations and 75% harmonic mean home ranges (----) for caribou calves in the La Poile Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



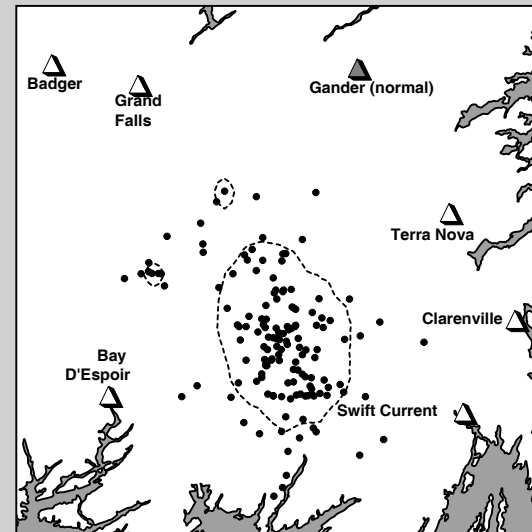
(i) Spring



(ii) Summer

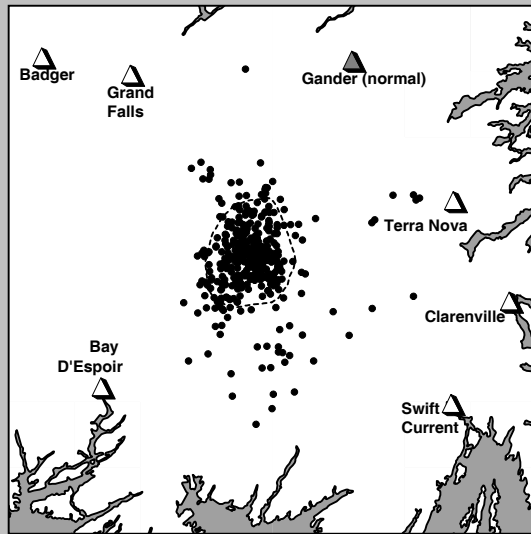


(iii) Fall

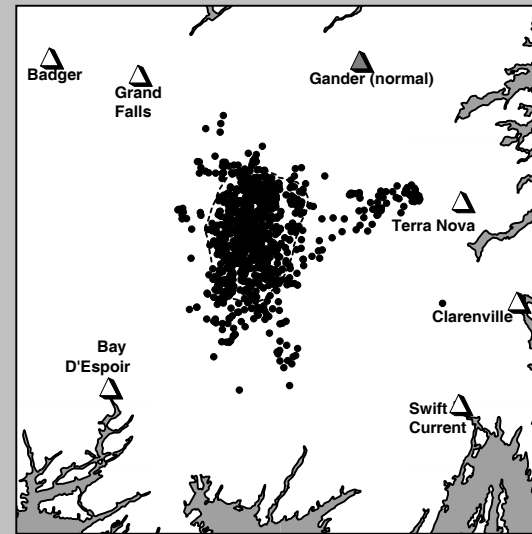


(iv) Winter

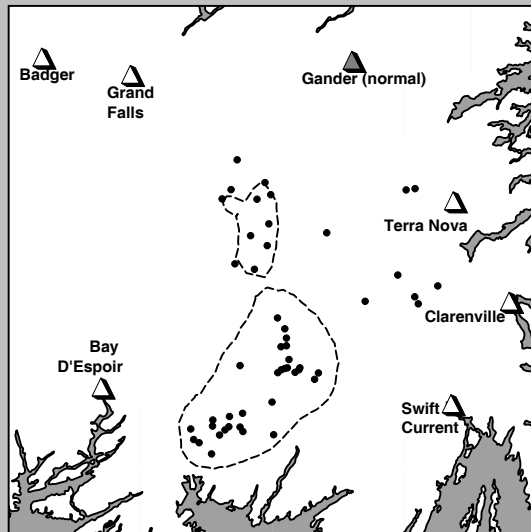
Fig. 2B-6a. Locations and 75% harmonic mean home ranges (----) for adult female caribou in the Middle Ridge Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



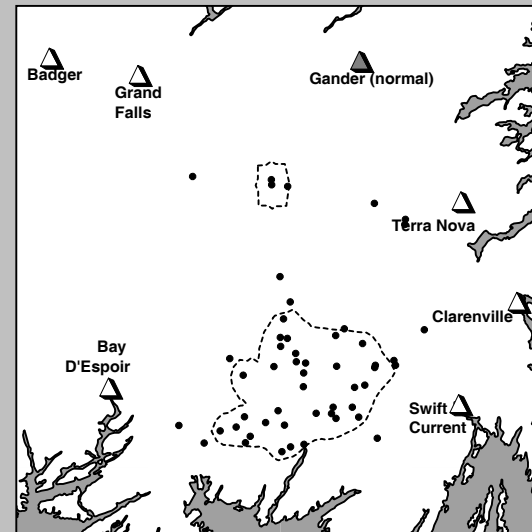
(i) Spring



(ii) Summer

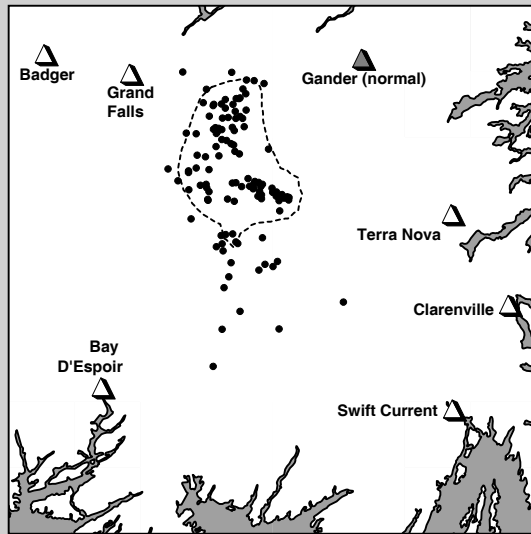


(iii) Fall

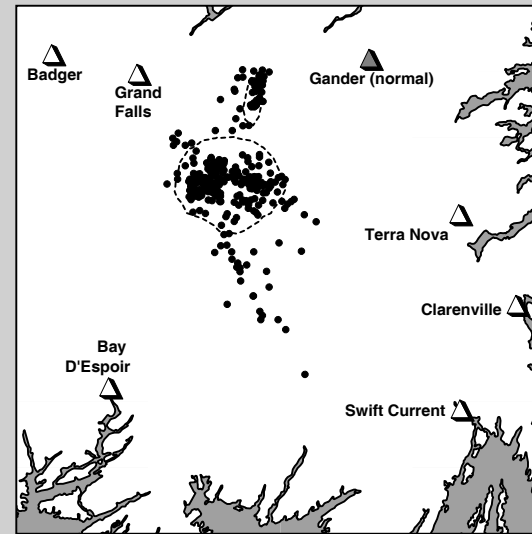


(iv) Winter

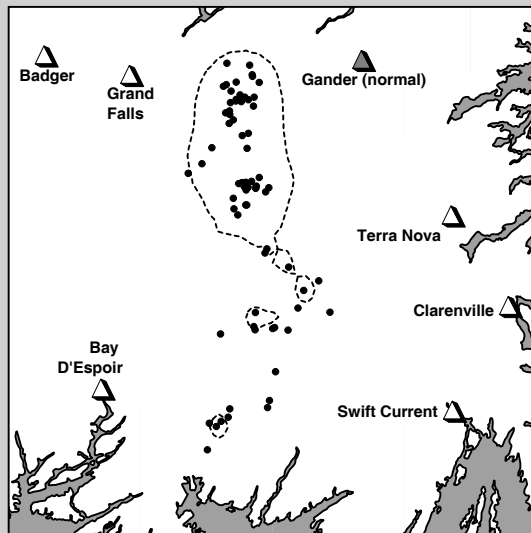
Fig. 2B-6b. Locations and 75% harmonic mean home ranges (----) for caribou calves in the Middle Ridge Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



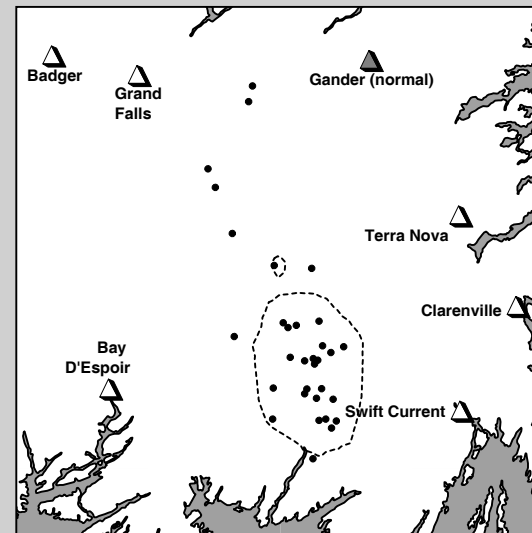
(i) Spring



(ii) Summer

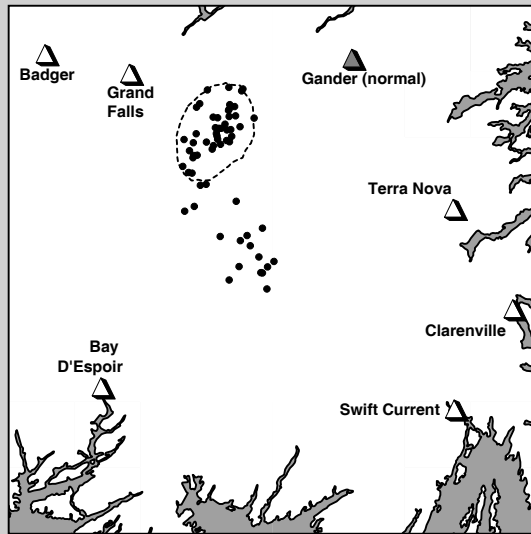


(iii) Fall

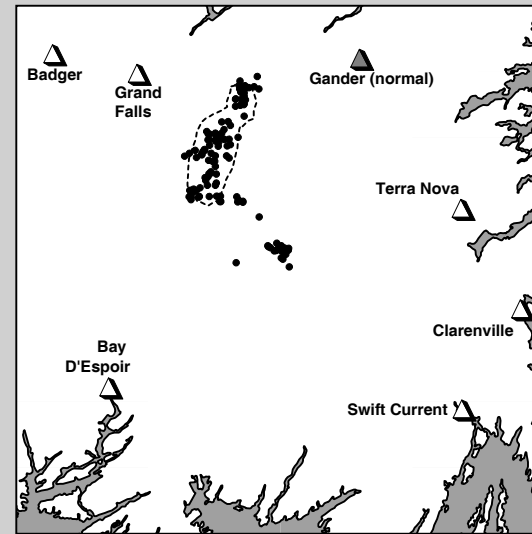


(iv) Winter

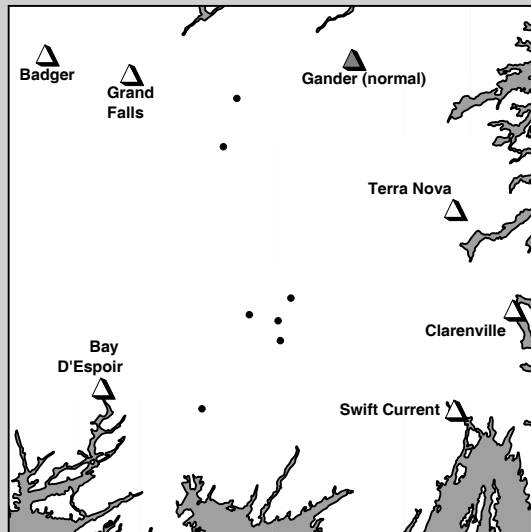
Fig. 2B-7a. Locations and 75% harmonic mean home ranges (----) for adult female caribou in the Mount Peyton Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



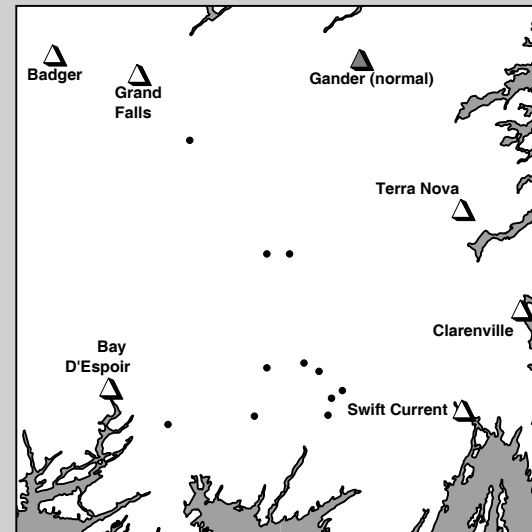
(i) Spring



(ii) Summer

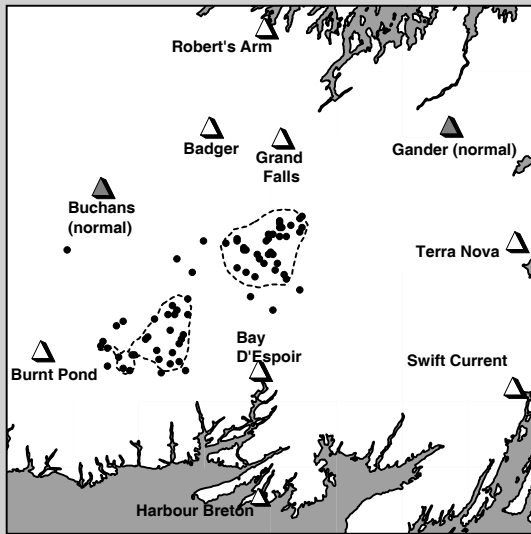


(iii) Fall

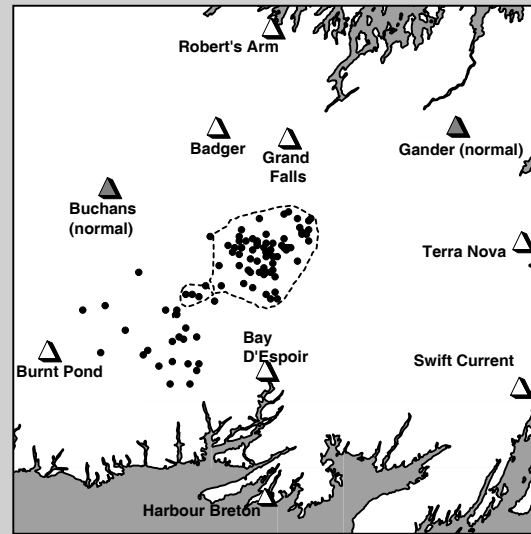


(iv) Winter

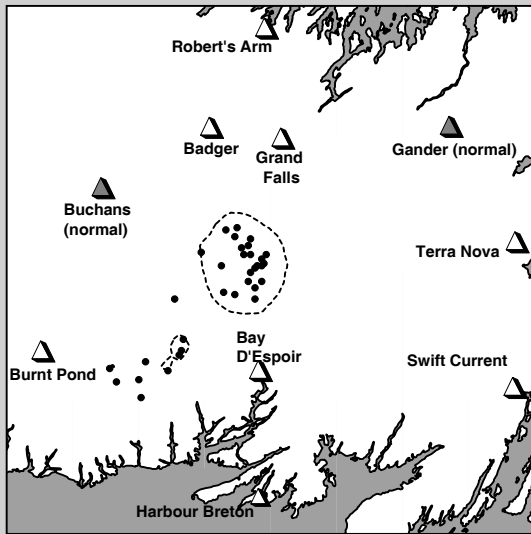
Fig. 2B-7b. Locations and 75% harmonic mean home ranges (----) for caribou calves in the Mount Peyton Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



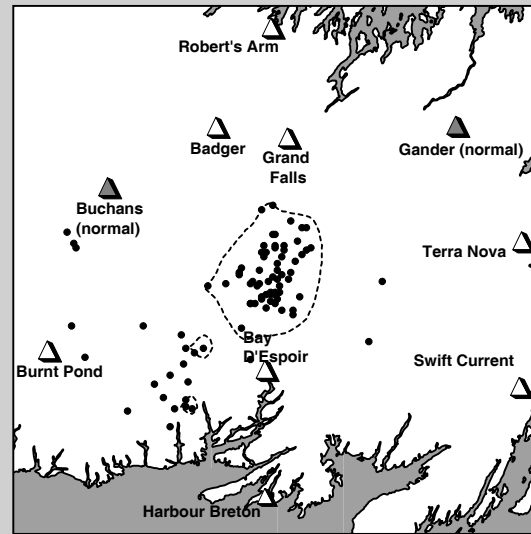
(i) Spring



(ii) Summer



(iii) Fall



(iv) Winter

Fig. 2B-8a. Locations and 75% harmonic mean home ranges (----) for adult female caribou in Pot Hill Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).

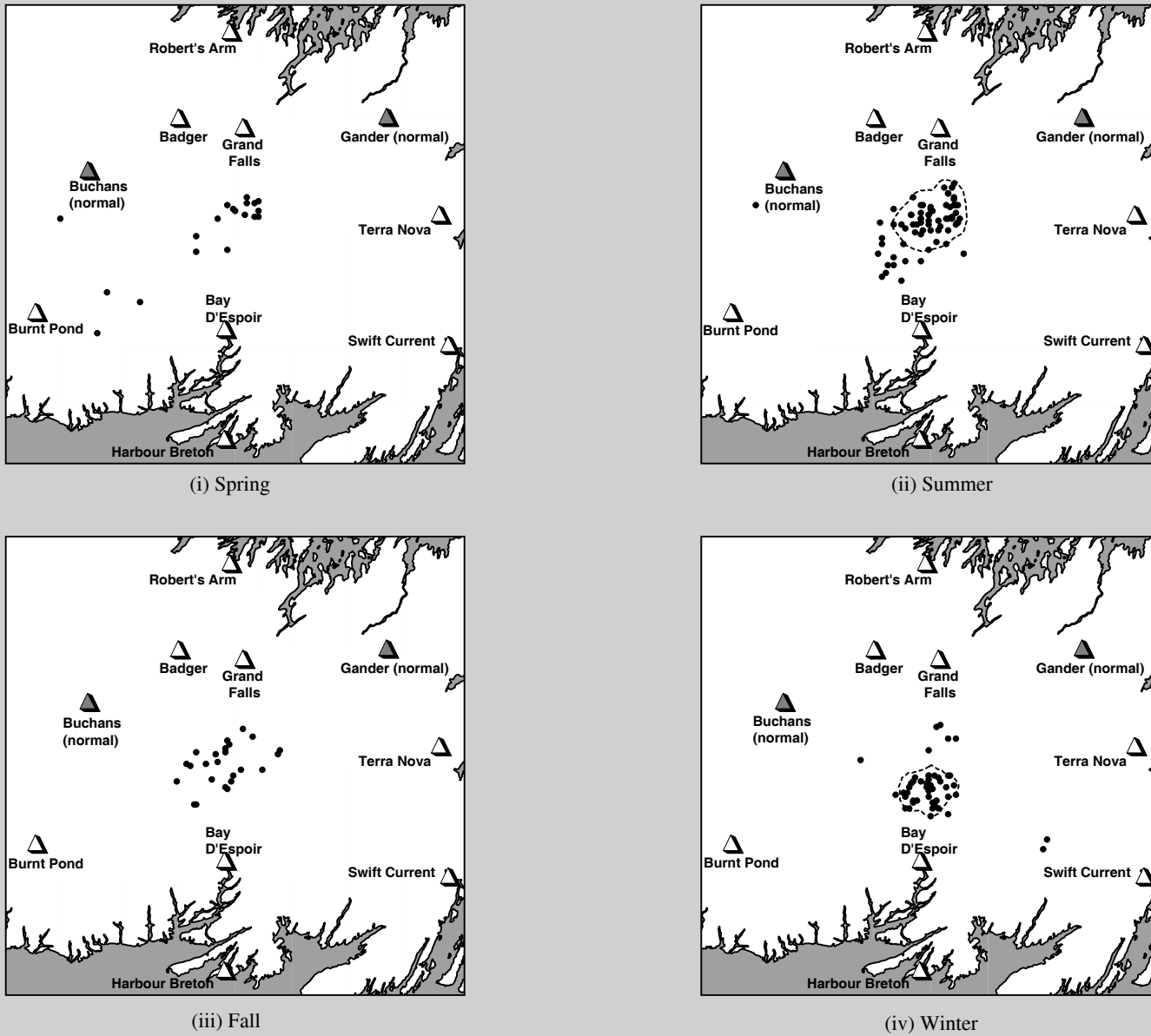
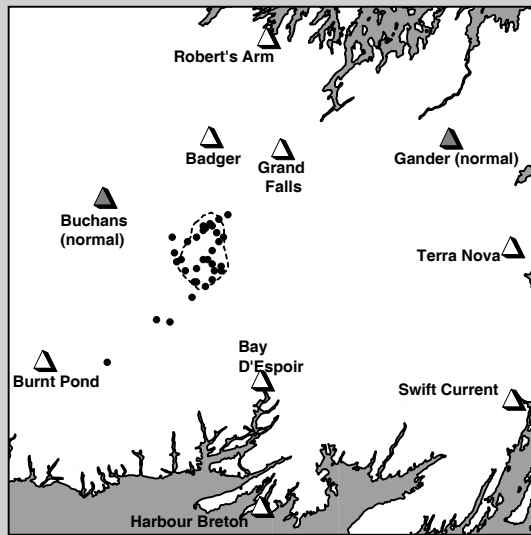
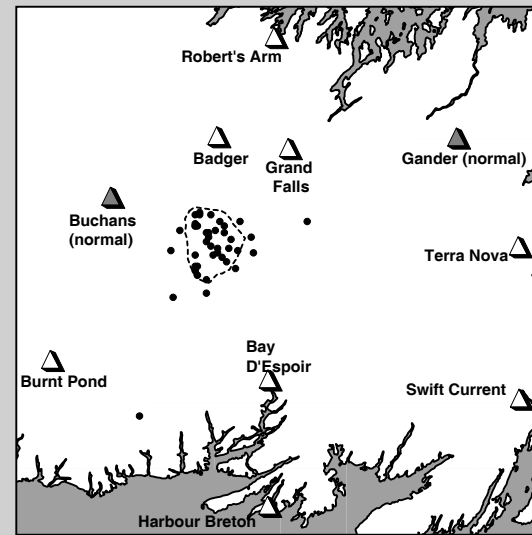


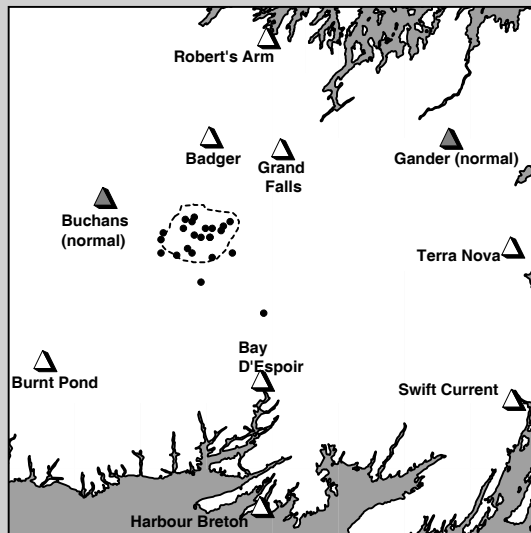
Fig. 2B-8b. Locations and 75% harmonic mean home ranges (----) for caribou calves in the Pot Hill Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



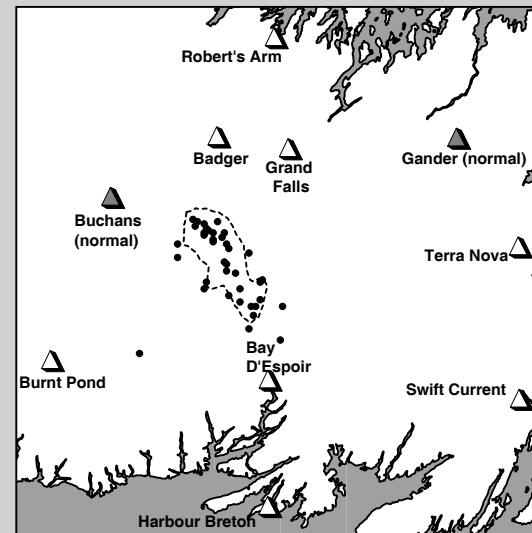
(i) Spring



(ii) Summer

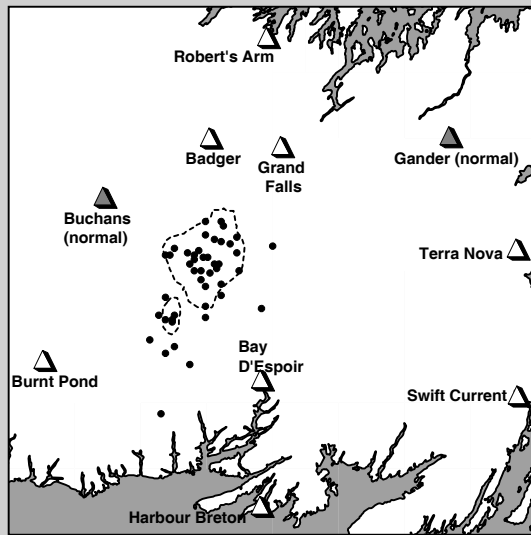


(iii) Fall

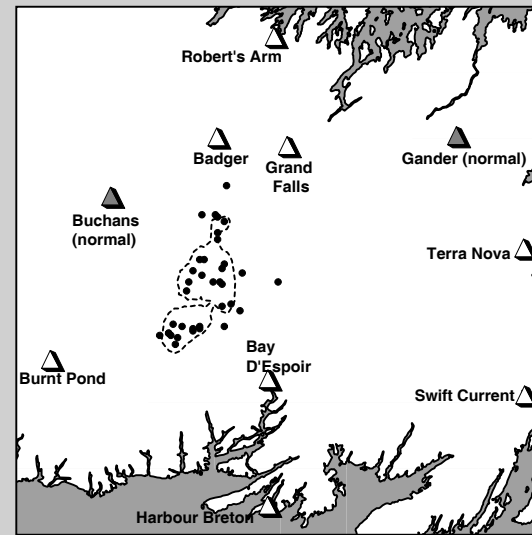


(iv) Winter

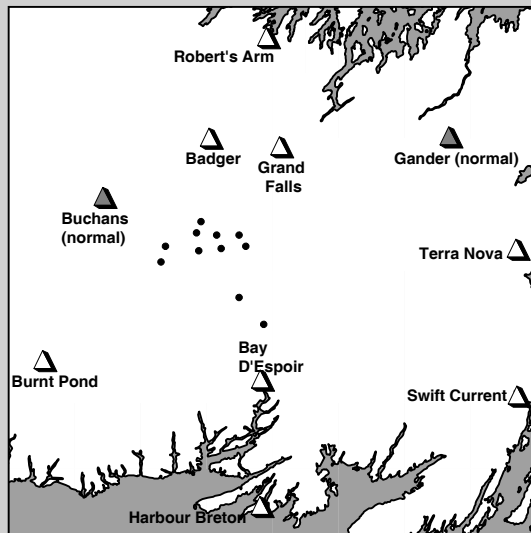
Fig. 2B-9a. Locations and 75% harmonic mean home ranges (----) for adult female caribou in Sandy Lake Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).



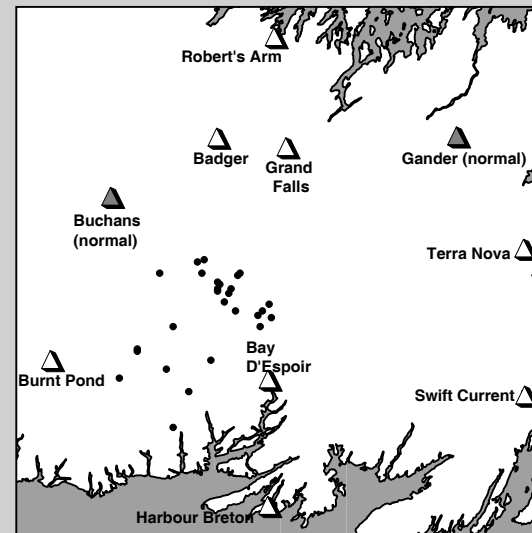
(i) Spring



(ii) Summer



(iii) Fall



(iv) Winter

Fig. 2B-9b. Locations and 75% harmonic mean home ranges (----) for caribou calves in the Sandy Lake Herd by season. Weather stations are identified for closest datasets (\triangle) and closest dataset including normals (\blacktriangle).

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