

THE QUEBEC INSTITUTE OF BIODIVERSITY

Annual report – year 2017

Register of Quebec Natural

Sciences Research

Collections

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The register of Quebec natural sciences research collections

Since 2003, members of the Quebec Institute of Biodiversity (IQBIO) have been traveling across Quebec to compile a repertory of Quebec's natural science research collections. The work required to develop this register consisted mainly in recording the existence of these collections, visiting them and documenting them.

Why a register ?

A register of research collections in natural sciences is essential to the scientific knowledge of Quebec's biodiversity and the risks it may encounter (for example, invasive exotic species, endangered species), in order to propose urgent interventions to safeguard the most valuable collections and finally to plan future needs for storage space to ensure their conservation, which includes financial and professional resources. We must emphasize the importance of preserving the collections that are part of Quebec's heritage and that are privileged witnesses of current or past ecosystems.

By creating a computerized database of metadata on different collections, it is possible to track the taxonomic, ecological and biogeographic representativeness of each collection as well as its specialization, growth, merger with others, or decline. From the ecological point of view, the register can document, if necessary, the arrival of a new species, the extension of its range or its outright disappearance. Also, by opening up the world of natural science collections to the general public, this register helps to disseminate and explain scientific concepts, document the richness of ecosystems and promote the importance of preserving natural environments.

The update of the register

Between 2003 and 2009, more than 150 visits were made by IQBIO's visiting committees. These visits made it possible to collect basic data on more than 250 collections held in Quebec and to develop a register of collections.

At the beginning of 2015, the register was at a stage that showed that there were 254 collections, about half of which had been documented. After completing the computerization of existing data, the registry was updated using a questionnaire that validated and acquired a certain amount of metadata from collections managers. By the fall of 2015, more than 40% of the questionnaires had been completed.

In 2016, while continuing its update, the register was transferred to a relational database in Access. The latter is now used as the main registering tool to input new data. The update continued and by the end of 2016 46% of the collections had been documented and some 20 new collections had been indexed.

In 2017, several corrections were made to the Access register in order to eliminate some errors in the recordings of the Quebec natural science research collections. The meticulous review of data entries has standardized information.

Restructuring the update statuses of the collections register

Following the updates and after contacting multiple institutions and collectors, the number of integrated collections (transferred and integrated into a parent collection) has increased in the register. Some problems related to the recording of the data of a collection once it is transferred, given and integrated into another collection have been noticed. So we had to change the update statuses of the collections to separate them into inactive collections (collections that are missing or integrated into others) and active collections.

In 2017, a new collection was added to the register, increasing the total number of registered collections to 269. A re-launch of the incomplete questionnaires was done in the fall of 2017. Currently, more than two thirds of the active collections of the Register have been documented and updated (Table 1). The tables showing the distribution of the collections by type, location and status and the progress of their cataloging are presented in Appendix 1.

Table 1. Statistics on the collections recorded in the register of Quebec natural science research collections.

The Quebec Institute of Biodiversity - Register 2017		
269 recorded collections		Percentage
Lost-discarded-missing collections	3	1,1%
Left-integrated-given collections	70	26%
Actives collections	196	72,9%
196 actives collections		Percentage
Completed questionnaires	132	67,3%
Incomplete questionnaires	54	27,6%
Not reachable	10	5,1%

Research of new collections in natural sciences

Following the reading of the Inventory of Scientific and Technological Collections of Quebec by the Society of Quebec museums and the discovery of the Info-Muse software, 8 institutions were contacted by email to learn more about their collections. In total, 3 institutions had a collection to add to the register. The completed questionnaires have not yet been received.

The collector of the month

In 2016, as part of the section entitled "The Collector of the Month", 4 interviews from September to December were conducted and published on the IQBIO website and on its Facebook page. This section paints a portrait of passionate collectors or curators who have devoted a part of their lives to Quebec collections. It contributes to the visibility of IQBIO on social networks and allows to join a larger community. In 2017, 5 chronicles were published between the months of January and June.

Visits

The visits of the collections were realized during the meetings for the collectors of the month. In 2016 and 2017, 10 visits were made to 36 collections located in Montreal area. A report on each of them has been written. It describes the nature of the visit, the maintenance of the collection, the space it occupies and its future prospects.

Guide

The writing of a reference guide called "What to do when you inherit a research collection?" has been initiated to deal with the different possibilities that the heirs of these collections have for safeguarding them under the best conditions. This guide deals with the monetary value of the collections, the host institutions and the legal and tax aspects of donations. Several institutions have been contacted and the reaction to this project is very favorable.

Budget

The annual budget allocation for the update of the register of collections is presented in Appendix 2.

Conclusion

The updated register of collections enables IQBIO to keep accurate statistics on the number, nature and location of the numerous and diverse Quebec collections of natural sciences research scattered throughout the territory. Thus, the IQBIO can better meet its mission and is able to recommend or take actions to preserve certain collections whose situation is precarious. The collections registry project is continually evolving as old collections disappear and new collections are added.

Here are some goals to reach during the year 2018:

1. Relaunch by phone the managers who did not return the completed questionnaire, the equivalent of 54 collections since the start of the registry update in 2015;
2. Ensure the updating of the register;
3. Look for new collections to add to the register by following some already established lines of research, such as the list of collectors of the Entomofauna of Quebec, the list of herbaria in Quebec, etc., and document these new collections;
4. Visit known collections in Saint-Jean-sur-Richelieu, Sherbrooke, Quebec City, Trois-Rivières and Montreal as part of the validation visits;
5. Conduct interviews for the "Collector of the Month" and write articles for publication;
6. Organize meetings and workshops to share knowledge about natural science research collections or to educate collections managers on best practices for documenting and sharing metadata or data about their collections;
7. Complete the reference guide "What to do when you inherit a research collection?".

Appendix 1. Update of the collections register data (January 2018)

Table 1. Distribution of the Quebec natural sciences collections according to their taxonomic or ecological type and their status.

Type of collection		Number	Percentage	Status (number and percentage)			
				Public	Parapublic	Private	Uncertain
Ecological		23	9%	12 (52%)	4 (17%)	5 (22%)	2 (9%)
Taxonomic	Arachnological	10	4%	3 (30%)	2 (20%)	5 (50%)	-
	Bryological	10	4%	3 (30%)	4 (40%)	3 (30%)	-
	Entomological	64	24%	12 (19%)	11 (17%)	40 (62,5%)	1 (2%)
	Herbarium	34	13%	8 (23,5%)	18 (53%)	7 (21%)	1 (3%)
	Herpetological	6	2%	2 (33%)	4 (67%)	-	-
	Ichthyological	16	6%	6 (37,5%)	9 (56%)	1 (6%)	-
	Invertebrate (marine, freshwater, terrestrial)	18	7%	7 (39%)	4 (22%)	5 (28%)	2 (11%)
	Malacological	12	4,5%	6 (50%)	4 (33%)	2 (17%)	-
	Mammalogical	10	4%	-	8 (80%)	2 (20%)	-
	Mycological	23	9%	3 (13%)	18 (78%)	2 (9%)	-
	Myriapodological	4	1,5%	2 (50%)	1 (25%)	1 (25%)	-
	Ornithological	14	5%	1 (7%)	10 (71%)	2 (14%)	1 (7%)
	Phycological	13	5%	4 (31%)	5 (38,5%)	3 (23%)	1 (8%)
Parasitology	7	3%	4 (57%)	3 (43%)	-	-	
Other (ex. : vertebrate brain cuts or morphological plant parts)		5	2%	2 (40%)	3 (60%)	-	-

Table 2. Distribution of the Quebec natural sciences research collections according to their preservation places and their status.

Preservation places	Number of status collections			Total	
	public	parapublic	private	Number	Proportion
Laboratories or government museums (Canada, Quebec or Montreal)	75	-	1	76	29%
Crown corporation laboratories (ex. : Hydro-Quebec)	-	-	-	-	-
Universities	-	101	10	111	42,5%
Collegial institutions	-	7	-	7	3%
Private museums of public interest constituted as non-profit corporations	-	-	12	12	4,5%
Private homes of individual owners	-	-	46	46	18%
Other (ex. : Chicobi camp-school, private laboratories, etc.)	-	-	9	9	3%

Note : The table above represents the distribution of the conservation sites of 269 collections. Eight collections with indeterminate conservation or uncertain status have been ignored in the calculations.

Table 3. Progression of Quebec natural sciences research collections data cataloging.

Cataloging code	Number (and percentage) of status collections							Total	
	public	parapublic	private kept in a public institution	private kept in a parapublic institution	private kept in a private institution	private home	Uncertain	Number	%
C1	12	34	-	-	12	11	-	69	26%
C2	10	11	-	1	-	5	-	27	10%
C3	5	5	-	-	4	1	1	16	6%
C4	7	8	-	-	-	3	-	18	7%
C5	37	37	1	9	4	21	4	113	42%
ND	4	13	-	-	1	5	3	26	10%

C1 Completely computerized data catalog

C2 Partially computerized data catalog

C3 Complete manuscript of available data catalog

C4 Incomplete manuscript of available data catalog

C5 No catalog known to date

ND Undefined

Appendix 2

Annual budget allocation for the update of the register of collections (2015 to 2018)

DATED DECEMBER the 31st 2017

	Achievements 2015&2016	Estimates 2017	Achievements 2017	Revised estimates 2018	Revised estimates 2019
Revenues					
External financing	10 000	25 000	25 000		
Carry-over of the previous year		3 035	3 035	20 935	7 500
IQBIO contribution	14 000				
Total (\$)	24 000	28 035	28 035	20 935	7 500
Labor expenditures					
1) Computerization of existing data	400				
2) Follow-up/Search collections	4 670	750	450	750	350
3) Questionnaire/Update of the register	5 020	1 750	2 100	1750	1600
4) Visits	200	2 500	500	2500	500
5) Database	970	700	950	700	800
6) Reports	3 030	2 000	450	2000	450
7) Financing	3 810	700	250	700	500
8) Other (web, articles, guide),	2 130	3 000	2300	3000	2 300
Total (\$)	20 230	11 400	7 000	11 400	6 500
Disbursements					
Deplacment cost	110	1 600	70	1 600	500
Software		100		100	100
Office expenses	115	150	30	135	100
Consultant	510	400		400	100
Other (conferences, workshops)		450		400	200
Total (\$)	735	2 700	100	2 035	1 000
Grand Total (\$)	20 965	14 100	7 100	13 435	7 500
Balance (revenues - spendings)	3 035	13 935	20 935	7 500	0