ENTOMOLOGY IN THE NATIONAL MUSEUM.

ALTHOUGH the department of insects in the national museum was organized three years ago, little has hitherto been attempted beyond the caretaking necessary for the preservation of the material already on hand; the honorary (or unpaid) curator of the department, Dr. C. V. Riley, having had comparatively little aid from the museum appropriation in the matter of construction of cases or the employment of assistants. At the beginning of the present fiscal year a salaried assistant-curatorship was established, to which Mr. John B. Smith was appointed. Additional accommodations in the laboratory and exhibition hall have been provided, and the study-collections and the exhibition series are now being rapidly extended.

In October Dr. C. V. Riley formally presented to the museum his private collection of North American insects, representing the fruits of his own labors in collecting and study for over twenty-five years. This collection contains over 20,000 species, represented by over 115,000 pinned specimens, and much additional material unpinned and in alcohol.

This generous gift to the government has long been contemplated by Dr. Riley, whose ambition it is to be, so far as possible, instrumental in forming a national collection of insects, and with the belief that his collection will form an excellent nucleus for future accumulations. In his letter of presentation he remarks, —

"While the future of any institution dependent on congressional support may not be so certain as that of one supported by endowment, I make this donation in the firm belief and full confidence that the national museum is already so well established in public estimation that it must inevitably grow until it shall rival and ultimately surpass other institutions in this country or the world as a repository of natural history collections.

"If there shall in the future result the concentrating here at the national capital of the extensive entomological material which naturally comes here, and which in the past has been scattered among specialists in all parts of the country, so that in the future the student may find valuable material to further his work in any order, I shall feel amply rewarded for the action I have taken."

A recent census of the national collection of insects has been taken, the specimens in each box having been counted. A summary of the results follows: —

The collection of Dr. C. V. Riley. — This collection contains the following pinned and mounted specimens:

	Boxes.	Specimens.	Species.
Hymenoptera	66	24,796	2,650
Coleoptera	127	43,613	6,558
Lepidoptera	338	17,098	2,308
Diptera	21	5,646	699
Hemiptera	59	8,862	1,184
Orthoptera	64	6,903	560
Neuroptera	14	868	169
Arachnida and Myriopoda	2	425	110
Insect architecture	16	1,080	178
Miscell. (not yet arranged)	28	1,610	178
Galls and gall insects	31	4,152	734
Total, pinned	766	115,058	15,328

The collection also contains some 2,850 vials of alcoholic material, chiefly of the adolescent states of insects, in many cases several species being contained in a single vial. The early states of the minuter insects are mounted in balsam on slides, of which the collection contains upward of 3,000, most of the slides holding the contents of three cover-glasses.

The mounted specimens are all duly classified and labelled, and in excellent order and preservation. The labels include notes as to locality and food-habit, and are also in many cases numbered to correspond to detailed notes as to adolescent states and habits. The collection embraces few exotic species, and is more particularly rich in biological material, containing more blown and alcoholic larvae and pupae in connection with their imagos than perhaps any other collection of North American insects. Including the unarranged and alcoholic material not connected with the pinned specimens, there are over 20,000 species in the collection.

Collection of the department of agriculture. — This collection comprises some 500 folding boxes, and 123 odd boxes, many of them but partly filled, and duplicating in a great measure those in the Riley collection. It also contains a large assortment of slides and alcoholic specimens accumulated during the past seven years.

Three hundred of the folding boxes contain a tolerable, classified collection, chiefly of Coleoptera and Lepidoptera. The other boxes contain all the more recent material collected for, or reared at, the department, and include the Brazilian collection of Dr. J. C. Branner and Mr. Albert Koebele. This material is separated by orders, but not yet carefully worked over or classified. They also include some few purchases from Messrs. H. K. Morrison and Wm. Wittfeld, the exotic Coleoptera from the administrators of the Belfrage estate, and the Burgess collection of Diptera.

This collection includes many undescribed species in all orders; and a rough estimate indicates that there are about 50,000 specimens, and probably 5,000 species, mostly exotic, not in the Riley collection.

The collection of the national museum proper. — This comprises all the material received during

the past three years. There are some 50 folding boxes, and some half dozen drawers of pinned and mounted specimens. These consist chiefly of exotic species, and mostly of the showier Lepidoptera sent to the museum because of their brilliancy, and without name. There are also about 100 bottles of various sizes, containing alcoholic material, much of it exotic, and considerable material of value as illustrating insect architecture. A rough estimate shows about 20,000 specimens, and 2,000 species not in the other collections.

Exhibit collection of economic entomology. — This collection, prepared for the New Orleans exposition, and a catalogue of which has been published, will be deposited in the museum. It is made up of the following sections: 1°. Insects injurious to agriculture (arranged according to the particular plant, and the particular part of the plant, affected). 2°. Insecticides. 3°. Insecticide machinery, and contrivances for destroying insects. 4°. Bee-culture. 5°. Silk-culture.

From the above statement it is evident that there are already something like two hundred thousand mounted specimens in the national collection, comprising some twenty-six thousand distinct species. This, together with the vast amount of alcoholic material already indicated, will serve to show its fulness.

REPORT OF THE POINT BARROW STATION.

THIS volume, which contains the report of Lieut. Ray's party at Point Barrow, 1881–83, is notable in several respects, and creditable to all concerned. It has been prepared by Lieut. P. H. Ray, U.S.A., and Prof. John Murdoch of his party, with the assistance of several experts. It is not necessary to rehearse the object and relations of the expedition, which have been repeatedly referred to in the pages of *Science*. The report begins with a statement of the orders and instructions under which the work was done. This is followed by a narrative by Lieutenant Ray of the transactions at Point Barrow, or rather the station Uglaämi near the Point, of his explorations of the Meade River, and of the voyage to and from the station. This narrative is unpretentious and interesting, and terminates with a hearty recognition, by the commander, of the qualities shown by the members of his party during the monotony and privation of their long exile. Lieutenant Ray also furnishes an ethnographic sketch of the natives of Point Barrow, which will be found entertaining reading, and is illustrated by some excellent heliotypes,— the best, indeed, we have seen from photographs made in this part of the arctic regions. They give very satisfactory views of the station, the grounded ice, the natives of Uglaämi, and of the village of Iliūliūk, Unalashka, at which the expedition touched. There is also a census and vocabulary of the Innuit of Uglaämi, and a list of the ethnological specimens obtained by the party, to the illustration of which several plates are devoted. Part iv. contains the natural history prepared by Professor Murdoch, assisted by Professors Asa Gray and C. V. Riley, Messrs. Fewkes, Dall, and others. The Innuit name of each animal is appended when known. The mammals, birds, and fishes are treated by Murdoch, and illustrated by two very successful colored plates of the beautiful rosy gull, Rhodostethia rosea. Professor Riley contributes some notes on the scanty representatives of insects; Professor Gray, others on the plants; Fewkes and Dall report on the acalephs and mollusks respectively; while Murdoch discusses the other marine invertebrates, especially the crustacea, of which some new species are described and illustrated. With the mollusks is given a heliotype plate of some critical species of Buccinum, with magnified drawings of the minute surface sculpture. The collection afforded several new forms of shells. There are notes on the collecting stations, and a useful bibliography of works consulted.

The fauna, as might be expected, is purely arctic, and has little in common with that of the North Pacific.

The meteorology, including auroral observations, follows, and naturally occupies many pages. Mr. C. A. Schott, of the U. S. coast survey, reports on the magnetics, a field where he is *facile princeps*. The tidal observations are given in full, with an illustration of the apparatus used. The rise and fall of tide is only six or seven inches, but during the time observations were carried on the level of the sea varied some three feet, a change due probably to differences of atmospheric pressure. The report closes with some observations on ground currents and on the thickness of the ice. The maximum of thickness was five feet two inches on the sea, reached in March, and six feet two and a half inches on the quieter surface of an adjacent lagoon, reached in May. There is a fair index. The preceding summary will indicate how rich a store of information the report affords for students of arctic matters, though some very valuable material is still in course of elaboration for future publication. Space fails us to discuss the questions arising from the investigation of the flora and fauna. It is evident, however, that so successful a sojourn and safe return, so

Report of the international polar expedition to Point Barrow, Alaska. Washington, *Government*, 1885. 695 p., illustr. 4°.