THE HOSTS OF ARGULIDS AND THEIR NOMENCLATURE.

AN excellent monograph of the 'North American Parasitic Copepods of the Family Argulidæ' has been contributed to the Proceedings of the U. S. National Museum by Dr. Charles Branch Wilson and just published. As it is 'the first of a series, now in course of preparation, on the parasitic Copepods,' it seems advisable to point out a defect which should be avoided in the subsequent monographs. The hosts are very often erroneously named or named in a very archaic or contradictory manner. The archaic nomenclature is chiefly connected with foreign forms and is the result of determinations of species made many years ago.

The host of *Argulus nattereri* (p. 720) and *Dolops longicauda* (p. 732) named '*Salmo* (*Hydrocyon*) *brevidens* Cuvier' (p. 720) or '*Hydrocyon* (*Salmo*) *brevidens* Cuvier' (p. 732) does not belong to the same order as *Salmo* nor to the same genus as *Hydrocyon* (which is confined to Africa), but to a genus (*Salminus*) peculiar to South America. The *Argulus salmini* (p. 720) was also found parasitic 'in the gill cavity' of *Salminus* and not of '*Salmo*,' a genus, as already stated, of a different order.

Species of '*Chromis*' are designated as the hosts of two species of Argulids, *Argulus chromidis* of Nicaragua (p. 721) and *Chonopeltis inermis* of Wiedenhafen, East Africa (p. 729).

Probably the Central American fish is a Cichlid of the genus *Heros*, and the East African, one of the genus *Tilapia*. *Chromis* is now reserved by all the best authorities for a salt-water genus of the family of Pomacentrids.

The host of *Argulus doradis* called *Doras niger* (p. 734) is now known as *Oxydoras niger*. The host of *Argulus africanus* (p. 727) called *Claria* is a catfish of the genus *Clarias*.

The host of *Dolops reperta* of Guiana (734) called '*Aymara*' is an Erythrinid now known as *Macrodon tareira* or by the earlier but extremely inappropriate name *Macrodon malabaricus*, due to a blunder of Bloch committed more than a century ago.

The host of *Dolops striata* (p. 735) and *Dolops bidentata* (p. 736) of Guiana, called 'a species of *Anguilla*,' is probably a species of a different order named *Synbranchus marmoratus*. No *Anguilla* has been recorded from Guiana.

The host of *Dolops discoidalis* designated as a species of *Platystoma* has been for nearly forty years universally called *Sorubim*.

Another fish, the common alewife, on the same page is called *Clupea vernalis* and *Pomolobus pseudoharengus*.

Dr. Wilson's bibliography is well digested, but he seems to have overlooked a few articles. Among such are three of minor importance by Reinhardt (1864), Frauenfeld (1870) and Dambeck (1877), besides one of considerable importance by von Nettovich (1900) of thirty-two pages and two plates.

One other defect should be remedied. No habitat except 'Wiedenhafen' is given for *Chonopeltis inermis*. As Wiedenhafen is not noticed in current gazetteers (it is not in the latest edition of Lippincott's) it was deemed necessary to refer to the original description but the only reference to the place of description was 'Thiele, 1901,' the rest of the line sufficient for the page being left blank. On reference to Thiele's article in the *Zoölogischer Anzeiger*, it appeared that Wiedenhafen is in East Africa. The name of the host is no guide.

The other lapses are not of sufficient importance to demand special attention here.

THEO. GILL.

COSMOS CLUB.

THE GREAT NEED IN AMERICAN ZOOLOGY.

AT the present day the zoologists of the United States of America can point to a considerable number of well-equipped laboratories, and of others in course of construction; of libraries, such as that of the Philadelphia Academy of Natural Sciences, which is probably not excelled; of an annually increasing number of fellowships and free scholarships to enable students to investigate; and of the aid of the government in maintaining such

institutions as the National Museum. Universities are growing richer, for which we are thankful, and more numerous, an evil necessary perhaps to the geographical extent of the country. There are great reference museums in Philadelphia, Washington, Boston, New York, Chicago, and others with a good promise that have been more recently started. These are surely signs of a vigorous activity in research, and we all must rejoice in them.

It is not buildings, nor endowment funds, nor libraries nor collections that make laboratories or universities or museums, but it is the men who do constructive work in them, those who discover and classify the facts. There have been examples of institutions that might have been splendid, but which have proved to be only ornate, and because capable men have not been placed in untrameled guidance of them they have proved to be melancholy mausoleums, examples of a donor's folly. They have had their use in the general economy of things, however, for they have taught the American public that men, and not buildings, mean greatness—the men who do the work for the love of it and without thought of personal advancement.

But the work that is being accomplished, the zoological investigations and reflections, what is being done to give it publicity? By no means all that should be done. The avenues of publication are incommensurate with the amount of the investigations. For we see nearly annually papers by Americans published in the English *Quarterly Journal of Microscopical Science,* in Spengel's *Zoologische Jahrbücher,* in the *Archiv für Entwicklungsmechanik,* and in the two *Anzeigers.* America builds and maintains laboratories in sufficiency, but does not afford to publish all the work done in them. One hesitates to undertake an elaborate contribution, particularly one with expensive illustrations, for when an American journal has at last been persuaded to accept it, great delay is experienced before its final appearance, and by the time the proofs are received they seem like an old and stale story. So we are obliged to advise our students to condense their doctor's theses, to omit colored drawings, even to use the pen in place of the pencil, in order to avoid the expense of lithography. Now any one at all conversant with the nature of zoological investigation understands how important for the representation of the facts are good and numerous figures; so important, that the zoologist is involuntarily inclined to estimate the truth of the facts contained in a paper by the character of the drawings, these being the concise evidence of what the describer has seen, or of what he thinks he has seen. The number of illustrations should in no case be reduced; in most cases they should be considerably increased, and as far as the mere statement of facts is concerned the illustrations should preponderate over the text. More thought goes into the making of a drawing than into the writing of a purely descriptive text, and much more technique. There would be much less confusion in descriptions, consequently much less also in conclusions, if writers had not been obliged to be sparing with their drawings, but every American editor shrinks before an offering of drawings. A certain German cytologist, as it will be recalled, sent out with each author's reprint of a paper upon cellular 'Elementarorganismen' a small ribbon of paraffine sections of the objects that he described, with the request that each recipient mount these sections, study them, and so be convinced of the writer's truth. That is a method of argument, however, that is generally not feasible; duplicate material cannot be furnished to all who are interested in a subject, but good drawings and plenty of them should be furnished, regardless of the expense of reproduction.

Plainly, what we need, and it is now the first need of zoological research, are ample means for publishing large monographs accompanied by numerous detailed plates, and for publication of them as rapidly as the plates can be reproduced. Our present journals are mainly the proceedings, transactions and memoirs of societies and universities, and the government publications; there are a considerable number of these, and some of them offer excellent facilities. Then there are a

few independent journals for general zoological papers, such as the *American Naturalist* and the *Biological Bulletin,* both intended for shorter contributions; and the more recent *Journal of Anatomy,* which is limited, however, mainly to vertebrate anatomy. Foremost among the independent journals is the *Journal of Morphology.* It has done its duty nobly; we are proud of it and ready to maintain it; but it should have two or three volumes a year, instead of a single one, and as many more as may be necessary.

That these avenues of publication are far from sufficient for the amount of investigation is shown by the fact, already mentioned, that a large number of American papers are being published abroad, and that American editors are obliged to insist upon small volume of text and paucity of illustrations. Occasionally a Mæcenas has come forward and made possible the publication of a large work; but obviously investigation cannot depend upon such sporadic aid. Contrast our relatively small number of journals with those in Germany. There, in addition to the publications of societies, which are more numerous than our own, and some of them much more sumptuous, are a large number of independent journals: the *Anatomischer Anzeiger, Zoologischer Anzeiger, Biologisches Centralblatt,* and others intended for shorter papers; and for larger monographs the *Zeitschrift für wissenschaftliche Zoologie, Archiv für mikroskopische Anatomie, Morphologisches Jahrbuch, Jena'ische Zeitschrift, Zoologische Jahrbücher, Anatomische Hefte, Ergebnisse der Anatomie und Entwicklungsgeschichte, Archiv für Naturgeschichte, Archiv für Protistenkunde,* and others. America can make absolutely no comparison with that array, which includes only the more notable journals. France and Austria also outdo us in facilities for publication.

To our shame it must be said that our avenues of publication by no means keep pace with the increase in work of investigation. It is not a new fact; it is a case of bringing owls to Athens to recall this state of affairs to the readers of SCIENCE. But the condition of apathy that has existed in regard to it needs to be replaced by one of activity. There are rich men who can financier our zoological publications if the matter be brought to their attention in the right way; an ample endowment fund for large monographs, safeguarded by a competent board of critical editors, is not chimerical, but entirely feasible. The society should feel itself honored by the tender of a good monograph, and not the author by its acceptance for publication; good work should not go a-begging. There should be a concerted attempt to strengthen all the present journals, by increasing already existing publication funds and by multiplying the number of subscribers. Can not the matter be so presented to rich men that they may see an endowment fund for publication is of greater service than the founding of a university? Few men are so made that they have so much delight in the discovery itself, that the charm is not enhanced by making it known to others; obstacles in the way of publication, such as there are to-day without need, may do much to dishearten research.

One word of warning must be said: we do not need new journals, but a financial strengthening of those that we already have. And because, first, we owe support to the journals that have stood by us; second, because concentration is wiser than extensification, and, third, because a new journal, whose name has not yet become known, means practical burial for the papers contained in its earlier issues.

THOS. H. MONTGOMERY, JR.
UNIVERSITY OF PENNSYLVANIA.

THE BISHOP COLLECTION OF JADE AND HARD-STONE OBJECTS.

HEBER R. BISHOP was born March 2, 1840, at Medford, Mass., and died in New York City, December 10, 1902, at the age of sixty-three years. Mr. Bishop recently presented his famous collection of jade and hard-stone objects to the Metropolitan Museum of Art, New York City, and gave the sum of $55,000 for its installation in suitable cases, to be made in Louis XV. style by Allard, of Paris, one of the leading artisans of France.