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*Botanische Zeitung*, No. 15. Weisner, On the Crystalline Character of the Waxy Deposit on Cuticle. Brefeld, On the Culture of certain Fungi. No. 16. Holle, On the Growth of Roots of Angiospermous Plants, with Special Reference to the Root-Cap. No. 17. Sadebeck, On the Relation of *Pythium Equiseti* to the Potato Fungus. No. 18. Velten, On Electricity in Plants.

### ZOÖLOGY.

ANOTHER CASE OF ANIMAL COMMENSALISM. — An interesting instance of animal commensalism came to my notice recently, during the cruise of the United States ship *Portsmouth* among the islands of the Pacific Ocean. I found in the cloacal dilatation of the alimentary canal of a holothurian a crab belonging to a class higher in the scale of classification than any that has yet been discovered possessing parasitical habits.

It is the first instance to my knowledge where a crustacean of the high type Cancroideæ has been found living as a "free messmate" within the body of another animal. It belongs to the family *Portunidæ*, or swimming crabs; and it is one of those aberrant forms, or connecting links, uniting the natatorial and the gressorial species.

It represents not only a new species, but a new genus; and Dana unconsciously possessed the type of the genus in a little individual which he found on the coral reef at *Ovolan*, *Feejee Islands*. He modified an already existing genus (*Lissocarcinus* White) in order that it might receive his species; yet, in spite of his modification there exists almost as wide a difference between the two as between two common genera of our own coast, *Carcinus* and *Platyonichus*, which are related in the same way. White, in the description of his species (*Lissocarcinus polyboides*), states that it is a powerful swimmer, with the tarsi of the posterior pair of feet broadly expanded; while in Dana's species the tarsi are flattened and expanded in about the same proportion as in *Carcinus*, a littoral genus, where the lateral expansion of the tarsus of the last pair scarcely exceeds that of the three preceding pairs.

Dana's species was a male; while the one which I found was a female. It is well known that among crustaceans it is generally the fe-

males that seek these strange places of abode, while the males live a free and roving existence; and as the general shape of the body is somewhat different in the two sexes under these circumstances, it is possible that Dana's species is the male form of the one which I discovered. In the latter the carapace or shield is less orbicular, and more produced transversely; while the shape of the claws and ambulatory feet, as well as the peculiar markings on each, are almost identical.

I propose for this little individual the suggestive generic title *Assecla*; the specific name *holothuricola* will indicate her odd place of abode. The habitat is Palmyra Island, one of the Fanning group. Dana's species belongs in the same genus under the name of *Assecla orbiculare*, unless further research should determine it to belong to the same species. — DR. THOMAS H. STREETS, U. S. N.

THE LITTLE WHITE EGRET IN COLORADO. — In Birds of the Northwest, Dr. Coues states that "the introduction of *Ardea candidissima* Gm." among the birds of the region drained by the Missouri and its tributaries "rests on its occurrence in Kansas, as recorded by Professor Snow." A specimen in fine plumage was killed and presented to me last week (May 4th), by Mr. James Sevar, of this place. It was taken on the shores of a small "lake," near the eastern base of the mountains, thirty miles northwest of Denver. The bird was a "lonely pilgrim," and had wandered far from its maritime home. — J. CLARENCE HERSEY, Boulder, Colorado.

SENSITIVENESS TO SOUND IN THE SHREW. — In the heavily-timbered forest in the neighborhood of Sheboygan, Michigan, on a cold day in October, 1875, I caught a characteristic full-grown specimen of Thompson's shrew (*Sorex Thompsonii* Baird). The pretty little creature had been busy about an old decayed stump, where it seemed to have its home. It uttered no audible cry, though at first it made several hostile demonstrations, endeavoring to escape, and, seizing my fingers in its mouth tried to bite them, but the delicacy of its teeth rendered the attempt futile. Having no suitable place in which to deposit it, I carefully wrapped it in paper, allowing its head to protrude, and held it in my hand. Some sportsmen were out shooting on the bay about a mile off, and the reports from their guns came to us from time to time, generally so much muffled by the distance as to be barely distinguishable, yet the shrew invariably responded to each detonation with a quick, spasmodic movement, evidently of alarm. Holding the animal as I did, the movement was immediately perceptible. Though aware that the acuteness of the auditory organs of these animals and their allied genera is most wonderful, I was hardly prepared for so unequivocal a proof of its extreme sensitiveness, which, under the circumstances, I was enabled to test repeatedly in this individual *Sorex*.

It was my intention to preserve the animal alive, and take it with me on my return home for further experiment and a study of its habits;

but, to my regret, on unfolding the paper while on my way to the house at which I was staying, I found the shrew had died. I have little doubt but that its death was caused by fright, as I handled it most carefully so as not to hurt it.

I found nothing of the unpleasant odor which is said to be secreted by certain glands with which this animal is provided, and which, in the form of a decided muskiness, is so apparent in the star-nosed mole. The shrew had, however, voided a slight quantity of excrement, which act, I believe, *in articulo mortis*, is common to all animals, including man. — HENRY GILLMAN.

#### ANTHROPOLOGY.

WESTERN WORKED FLAKES AND NEW JERSEY RUDE IMPLEMENTS. — Capt. Wm. A. Jones's Reconnaissance of Northwestern Wyoming having been received after the proof-sheets of my paper in the June NATURALIST were corrected and returned, I could not avail myself of the very interesting remarks of Professor Comstock on the archæology of that region, which in part refer to specimens such as I have described and figured in the article referred to. The implements described by Professor Comstock (Figures 40 and 41, p. 260) are evidently identical with that figured on page 331 of the NATURALIST (vol. x.). Of these western specimens Professor Comstock remarks, "It is scarcely to be supposed that these rude splinters have ever subserved the purpose of weapons or other implements, although there are many of the flakes of more definite shapes which may have been so employed. It seems probable, however, that a large proportion of those which can be referred to no particular form are merely the rejected pieces which have been spoiled during the process of manufacturing more perfect implements, or, in some cases, perhaps they are pieces from which smaller arrow-heads have been chipped." I cannot think that these specimens, at least such as those figured, are rejected or spoiled implements. The fact that the same forms occur in New Jersey, associated with others of scarcely more definite shape, and *not associated* with "smaller arrow-heads," is evidence, I claim, of their being finished implements. Again, if "failures," is it probable that there would be that uniformity in shape and size, which obtains among them? Thirdly, their outline suggests no other form of implement, such as we know; as "blocked-out" javelin heads, axes, and hatchets are well-known shapes to the collectors.

The similarity of the western specimens to fragments of rock, undoubtedly naturally formed, has suggested the possibility of all being of natural and not artificial origin. That a fragment of rock, accidentally produced, should be nearly or quite identical in outline with certain well-known forms of Indian relics, is quite natural, inasmuch as happily shaped pieces of flinty stone were the first tools used by primitive man, and suggested, in the course of centuries, the variations in shape which the increasing number and character of their wants demanded. The



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