

## SOME LITHOBIOMORPHA FROM THE REGION OF SAN FRANCISCO BAY.

BY RALPH V. CHAMBERLIN, PHILADELPHIA, PA.

Of the six species of the Lithobiomorpha described by Stuxburg from California, the types of four were secured at Sausalito, or near by, on San Francisco Bay. Among these the identification of *Lithobius kochii* and *Lithobius obesus* has been simple; but considerable uncertainty has attached to the forms designated by Stuxburg as *Lithobius megaloporus*, later placed in his subgenus *Pseudolithobius*, and *Lithobius pusio*, placed by its author in his subgenus *Archilithobius*, this difficulty being due to the fact that the types were immature individuals, as I previously showed to be indicated by various points in one description. In order, if possible, to clear up this uncertainty, especially with reference to the species *megaloporus*, which seemed to merit generic rank, I took advantage of an opportunity presented in April of this year to make collections at Sausalito and several other points on the San Francisco Bay (Mill Valley, Oakland and Berkeley). Ample material of the species described by Stuxburg, as well as of other species, including several interesting new ones, was secured.

The anticipations with reference to the species *megaloporus* and *pusio* were fulfilled. Stuxburg gives the length of *megaloporus* as 12 mm., whereas that of adults is from 35 to 39 mm. The species must be given separate generic rank, and will stand as *Pseudolithobius megaloporus*. The species *pusio*, as anticipated, proves to belong to the genus *Bothropols* and to have been based upon a young specimen of a distinct species, and not of *B. monticola*, as was thought possible. *B. monticola* seems not to occur in the Coast Mts. or region, but to be confined to the Sierras and the country northward, being common in Oregon and Washington. Brief descriptions of these two species are given below.

Of the new forms discovered quite unexpectedly, the most interesting is *Buethobius coniugans*, the second species of the genus to become known. Unlike *B. oobitus*, the type species, the new species shows conspicuous sexual dimorphism. The males are uniformly larger than the females, and are remarkable for the very long and distinctly three-jointed gonopods, differing from those of the female in lacking terminal claws and basal spines. In this regard the species suggests a transition from forms presenting no dimorphism to those such as *Lithobius*, in which it is more marked and the male gonopods mostly small and wart-like and