

Islands, at an average depth of 500 fathoms, on a muddy bottom, with a temperature approximating to $39^{\circ}5$.

The genus *Pentacheles* appears to range as far as the limits of the great Pacific Ocean. Species have been taken among the Australasian Islands, the Philippine and New Guinea groups, near the middle of the ocean, about the Fiji and Kermadec groups, and along the south coast of South America, from Juan Fernandez to Cape Horn. Most of these were taken in the open ocean some distance from land, and generally on a muddy or oozy bottom formed of the débris of *Globigerina* and other Foraminifera. The depth at which they were taken varied from 120 to 1375 fathoms, but generally it was about 500. Belonging to exceptionally shallow water was *Stereomastis (Pentacheles) suhmi*, a species which, together with *Stereomastis (Pentacheles) auriculata*, I have been induced to separate from the other species and establish as an independent genus, in consequence of their having no mastigobranchial plates attached to the podobranchiæ (see p. 14). *Stereomastis suhmi* was captured within the narrow channels that separate the numerous rocky islets from the coast of Western Patagonia. The species from exceptionally deep water are *Pentacheles obscura*, a much damaged specimen taken north of New Guinea, in 1070 fathoms, and *Pentacheles lavis*, obtained off Juan Fernandez, at a depth of 1375 fathoms, but this latter species is represented by a second specimen taken south of the Philippine Islands, at a depth of only 500 fathoms. The temperature at the bottom varied from $35^{\circ}5$ to $41^{\circ}8$, according to the greater or less depth of the ocean, and the sea bottom, with one or two exceptions, is recorded as being formed either of mud or *Globigerina* ooze.

The general aspect of the animals, even when specifically distinct, bears a general close resemblance, and the alteration of the branchial apparatus appears to have no important influence on the external appearance. In *Pentacheles euthrix* the mastigobranchial plates are of extreme tenuity, and reduced in size, while they are absent in *Stereomastis auriculata* and *Stereomastis suhmi*. Yet the general character of their habits appears to correspond.

Willemasia has been found in the middle of the North and South Atlantic Oceans. It was also taken in the Pacific, about 500 miles from the coast of South America, at a depth very nearly as great as that in the Atlantic, and at nearly similar temperatures, namely, $34^{\circ}6$ and $35^{\circ}5$ at a depth of 1375 and 2225 fathoms, as compared with a temperature of $36^{\circ}8$ in the North, and $36^{\circ}4$ in the South Atlantic Ocean, at 1900 fathoms. As in the preceding genera, the sea bottom where they were taken consisted of *Globigerina* ooze, a deposit sufficiently constant to induce us to believe that it is the common home of all the species of the genera that make up this group. The exceptions to these are few, only three, I believe, and these are in relation to *Pentacheles euthrix* and *Polycheles baccata*, which were taken on a rocky and red clay bottom.

Within certain limits it is therefore presumable that the family is represented by