

Chiton. The third example of this genus collected by the Expedition is *Leptochiton kerguelensis*, n. sp., from Royal Sound, Kerguelen, at a depth of 60 fathoms (bottom temperature 40°). *Leptochiton cancellatus*, Sow., which is a coast and comparatively shallow water form of Northern Europe, being found down to a depth of 300 fathoms off Lofoten, extends from Vigo, Spain, to Greenland, and off the Canadian coast in the North Atlantic down to 300 fathoms. Dall also dredged it at Alaska in from 6 to 100 fathoms. Thus *Leptochiton* may claim to be an Arctic or north temperate genus, which also ranges to great depths, at least in the North Pacific.

Another Leptoid genus, *Hanleyia*, also appears to flourish better in colder waters. *Hanleyia debilis*, Gray, is found in British seas northwards. Sars dredged it near North Cape in from 25 to 300 fathoms, and the U.S. Fish Commission in Massachusetts Bay, from 38 fathoms. *Hanleyia mendicaria*, Migh. and Ad., occurs at Casco Bay; Grand Manon; Portland Harbour, Maine, the deep water specimens being much larger than those from shallow water. *Hanleyia* (?) *abyssorum*, Sars, comes from 150 to 200 fathoms off Bergen, Norway. *Hanleyia tropicalis*, Dall MS., is a large and beautiful species from 128 fathoms, Sand Key in the Gulf of Mexico (Dall). The allied genus *Hemiarthrum* has only one species, *Hemiarthrum setulosum*, Carp., which the Expedition collected from the shore of Kerguelen Island.

Of other Chitons from moderately deep water the following may be noted: *Chæto-pleura apiculata*, Say, from 100 miles S.E. of Martha's Vineyard, Mass., at 210 fathoms (bottom temperature 40°·5 F.), Dall, Proc. U.S. Nat. Mus., 1882, p. 410. The Expedition dredged *Lepidopleurus dorsuosus*, n. sp., at 310 fathoms off Prince Edward's Island, and *Lepidopleurus dallii*, n. sp., off South Chili from 400 fathoms (bottom temperature 46°·5); *Plaxiphora carmichaelis*, Gray, 345 fathoms, South-West Chili (bottom temperature 46°), and *Plaxiphora simplex*, Carp. MS., was collected on the shore and dredged from 110 fathoms at Tristan da Cunha. Several species of the genus *Trachydermon* and other genera occur at low water and at moderate depths down to about 100 fathoms.

The general distribution of the shore Chitons is now fairly well known, and the specimens collected by the Expedition present us with no new features of interest.

This Report, however, brings out still more prominently the necessity of a large number of specimens being collected from as many localities as possible. In some groups especially there is a great tendency to individual variation, so that an unnecessary number of new species have been described, or, at all events, they have been so described as to mask their real affinities. In order to solve the problems of Geographical Distribution, and to learn the true lesson of the variability of species, it is indispensable to compare large series of specimens, and, while accurately noting and tabulating varieties, to be very careful about describing them as species. For the sake of convenience, well characterised or locally restricted varieties may advantageously receive some varietal designation, and it would be preferable if this could convey some reference to the type or central form. If