

of the scarlet flowers of *Erythrina indica*. When, finally, the "Seasea" (*Eugenia*) is in bloom, the men look out for the moon's being just above the western horizon at the dawn of day, and on the tenth morning the *Palolo* appears. The extra lunar month, however, occasionally misleads them. There is a second appearance of the *Palolo*, a month after the first, probably consisting, he says, of those that are not sufficiently mature to spawn in October, or, perhaps, another species.

Family EUNICIDÆ.

The representatives of this family are comparatively numerous in the Challenger series; indeed, though apparently more plentiful in the warmer seas, they occur in most oceans, from the extreme north through the temperate and tropical seas to the extreme south. A large number accordingly, arranged under five genera, are described by Kinberg in his Freg. Eugen. Resa; and Grube presents fourteen from the Philippines. Schmarda gives an account of nine in his Neue wirbell. Thiere, but his woodcuts of the minute structure are somewhat indefinite, and it is thus difficult to recognize the species. Only five are indicated by Prof. Grube in the collection of the German exploring ship "Gazelle." Ehlers found no less than thirty-four in the Annelids procured by Alexander Agassiz in the "Blake," and he considered them the most important group in the collection.¹

The Eunicidæ are discriminated in spirit by their general form, the structure of the dental apparatus, branchiæ, feet, and bristles. Considerable variety occurs in the structure of the dental apparatus, even in the same species, and this is not always due to sexual distinction. It must also be borne in mind that changes in outline as well as in colour ensue as age advances. Moreover, the number of teeth in the lateral and great dental plates is not always the same. Schmarda, Kinberg, and Ehlers place considerable reliance on the dental characters, but Grube, while coinciding with them, also points out that there is variation both in these and in the branches of the branchiæ. On the whole the species are less easily defined than usual in the group, and much yet remains to be done in synonymy. It is hoped, however, that the accompanying structural figures and descriptions will obviate some of the difficulties of subsequent observers.

The examples procured by the Challenger have, as a rule, lost their tubes. *Eunice magellanica*, however, presents a tendency to branching in its tube, and it is possible that such foreign examples may be connected with the branched tubes found in sponges and elsewhere. Grube found *Eunice siciliensis* in tubes in the limestone of Quarnero.

The species range from shallow water to 1240 fathoms. Their food is varied,

¹ *Bull. Mus. Comp. Zool.*, vol. v., Nos. 11 to 14, p. 273.