

lamellar appendage at the base of the outer antenna. It is very likely that when the recent deep-sea forms near the Astacidæ and Palinuridæ come to be carefully correlated with the cretaceous and jurassic species, it may be necessary to establish an additional family, the Eryonidæ.

The second crustacean, although having little of the facies of the typical *Astaci*, presents apparently no characters of sufficient value to warrant its separation from that genus.

*Astacus zaleucus*, v. W.-S. (Fig. 60), with its long, compressed cephalo-thorax, flattened abdomen, and unequal chelæ, has at first sight somewhat the appearance of a *Calianassa*.

The total length of the animal is 110 mm., the cephalo-thorax 50 mm., and the abdomen 60 mm. The carapace is hard and firm, though only slightly calcified. It is greatly compressed laterally, rising into a high arch. It terminates in front in a slender spiny rostrum 8 mm. in length. The rostrum is covered with a thick felting of hair, which extends backward, forming two hairy triangles on the anterior part of the cephalo-thorax. In front of the carapace, between its anterior and upper edge and the insertions of the antennæ, in the position of the eyes in such forms as *Astacus fluviatilis*, there are two round vacant spaces, which look as if the eye-stalks and eyes had been carefully extirpated, and the space they occupied closed with a chitinous membrane. The lamellar appendage of the outer antenna has teeth along its inner border. It extends to the middle of the second basal segment of the antenna, which is remarkably long. The flagella of the outer antennæ are 130 mm. in length. The inner antennæ originate on a line with the outer. The funiculus is shorter, and the flagella, which are equal in length, are much shorter than those of the outer antennæ.

The parts of the mouth are normal. The three first pairs of ambulatory legs are terminated by chelæ, the fourth pair bear recurved claws, and the fifth abortive stump-like claws. The