Part 16
Decapod Crustaceans

Rita Vargas and Ingo S. Wehrtmann

Solenocera agassizi, locally called “camarón fidel,” from Pacific Costa Rica (Photo: Ingo S. Wehrtmann)
Abstract We report the presence of a total of 549 decapod species for Costa Rican marine and coastal waters, including eight species not mentioned previously for Costa Rica. Species number was substantially higher for the Pacific (438 spp.) compared to the Caribbean coast (119 spp). Brachyura (253 spp.), Anomura (116 spp.), and Caridea (114 spp.) comprised the highest number of species. Pacific Costa Rica supports 55% and 52% of Decapoda and Brachyura, respectively, known to occur in the Panamic Province. Species diversity in the Caribbean is more difficult to compare due to the lack of adequate and updated information.

Introduction

The name “Decapoda” refers to the principal diagnostic feature of the representatives of this order: the presence of five pairs of legs (pereiopods). Not all of these five pairs are necessarily used for walking; e.g., the first pair of pereiopods may be modified as large claws (as in alpheid shrimp [Fig. 16.1] and some lobsters), or the last pair is paddle-shaped and used for swimming as in some portunid crabs. Moreover, decapod crustaceans are characterized by the development of a carapace, which encloses the branchial chambers, and by the modification of the first three thoracopods as maxillipeds (McLaughlin 1980).

Decapod crustaceans comprise roughly 10,000 species (Gruner 1993), which occupy a great diversity of marine, freshwater, and semiterrestrial habitats. They are distributed from the tropics to the Arctic and Antarctic. A vast majority (roughly 90%) inhabit marine environments and adjacent brackish waters (Gruner 1993).

Many decapod species are commercially exploited by coastal and offshore fisheries (Fig. 16.2), and these natural resources may play an important role for the economics of the countries involved in such fisheries or aquaculture efforts (Caddy

![Image](https://example.com/image16.1)

Fig. 16.1 The snapping shrimp *Alpheus nuttingi*, collected in Cahuita, Caribbean coast of Costa Rica (Photo: Arthur Anker)