

Biology and Life History of Cephalopods

an interim meeting of the international cephalopod community



CephRes 2020 Virtual Event

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behavior, cognition, evolution, ecology, fisheries,
genomics, neuroscience, taxonomy

an interim meeting of the international cephalopod community

a CephRes initiative

endorsed by the CIAC (Cephalopod International Advisory Council)

BOOK OF ABSTRACTS

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Feeding ecology of the cephalopod *Octopus vulgaris* illustrated by a stable-isotope approach

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Cephalopods play a key role in the marine environment, but studies of their feeding ecology are still limited. Stomach content analysis have been the main method used for studying the diet of cephalopods, but despite being time-consuming, the prey is often difficult to determine. This technique allows the determination of species eaten, using hard parts that tend to resist digestion and remain in the stomach for longer period of time or hard parts which resist digestion, such as crustacean exoskeletons, cephalopod beaks, fish otoliths, and bones.

A stable isotope study was carried out seasonally to investigate the feeding ecology of the cephalopod *Octopus vulgaris*, and its potential prey species were identified according to the species that appeared in pots collected by fisherman. The food items identified were the fan mussel (*Atrina fragilis*), Algarve volute (*Cymbium olla*), Henslow's swimming crab (*Polybius henslowii*), and the red-band fish (*Cepola macrophthalma*).

The stable isotope mixing model SIAR indicated that *O. vulgaris* is predated mainly on the bivalve *A. fragilis* (mean value: 70%). *P. henslowii* could have a contribution of 18% to the cephalopod diet, whereas the gastropod *C. olla* and the fish *C. macrophthalma* were much less important to the consumer diet (7 and 5%, respectively).