

INFLUENCE OF AMINO ACIDS ON THE RESPIRATION OF SOME ANTARCTIC AND ARCTIC NECROPHAGOUS AMPHIPODS

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Three species of a common, necrophagic Amphipods from Antarctica: *Abyssorchomene plebs*, *Waldeckia obesa* and *Onisimus littoralis* from Arctic were the objects of this study. All of them are in similar size of 2-3 cm and occurs in the similar habitats (bottom of shallow waters and intertidal zone). Various chemical substances dissolved in the water can be recognized as chemical signals informing several marine animals about food sources, and may induce in them certain defined reactions. Amino acids released from food can increase of the oxygen consumption and change behaviour of necrophagic, marine invertebrates. Starvation increases this effect. L-glutamic acid and arginine in concentration of 10 mM increases respiration rate of starved individuals of this species from 23% to 300%. This amino acids plays an important role as a universal food signal and they are involved in trophochemoreception processes for similar species of Antarctic and Arctic Amphipods which are an important members of the guild of necrophagous animals. This kind of reactions of animals to chemical signals are an important adaptation for active food searching processes.

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