

An illustrated key to the Bulgarian freshwater crayfish species of family Astacidae (Crustacea: Decapoda)

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Abstract

A key for the 3 crayfish species of the family Astacidae (Crustacea, Decapoda) found in Bulgaria: *Astacus leptodactylus* Eschscholtz, 1823; *Astacus astacus* (Linnaeus, 1758) and *Austropotamobius torrentium* (Schrank, 1803) is presented. More important identification characters are illustrated with original photographs.

Key words: freshwater crayfish, Astacidae, illustrated key, Bulgaria.

Three crayfish species: the noble crayfish *Astacus astacus* (Linnaeus, 1758), the narrow-clawed crayfish *Astacus leptodactylus* Eschscholtz, 1823 and the stone crayfish *Austropotamobius torrentium* (Schrank, 1803) are known to occur in Bulgaria (Holdich 2002; Souty-Grosset *et al.* 2006; Zaikov & Hubenova 2007). The only announcement for the existence of *Astacus pachypus* Rathke, 1833 in Bulgaria was made by Bulgurkov (1964), based on collected specimens in 1939 from one single site, but it is still not unconfirmed. At present it is considered that this species does not inhabit the Bulgarian freshwaters.

Present key to the crayfish found in Bulgaria is based mainly on the determination keys of Fureder & Machino (2002) and Holdich & Vigneux (2006) as well, as on morphological investigation of some crayfish populations in Bulgaria made by the author.

KEY TO THE CRAYFISH OF ASTACIDAE FOUND IN BULGARIA

- 1** – Area behind cervical groove smooth, cervical spines absent (Fig. 1a), rostral borders triangle (Fig. 1b), chelae surface granulation very big (Fig. 1c), under side dirty white or reddish (Fig. 1d). ***Austropotamobius torrentium***
– Area behind cervical groove with different number of spines (Fig. 2a; Fig. 3a), rostral borders parallel or almost parallel (Fig. 2b; Fig. 3b). **2**
- 2** – Numerous number of well visible spines present from behind cervical groove (Fig. 2a), fingers of chelae long and narrow, under side pale (Fig. 4a), abdominal pleura 2-4 tapering, with sub terminal spine(s) (Fig. 2c), talon on second gonopod present in male (Fig. 2d). ***Astacus leptodactylus***
– Numbers of spines behind cervical groove smaller (Fig. 3a), chelae robust, wide, under side red to brown (Fig. 4b), abdominal pleura 2-4 broad and rounded (Fig. 3c), talon on second gonopod in male absent (Fig. 3d). ***Astacus astacus***

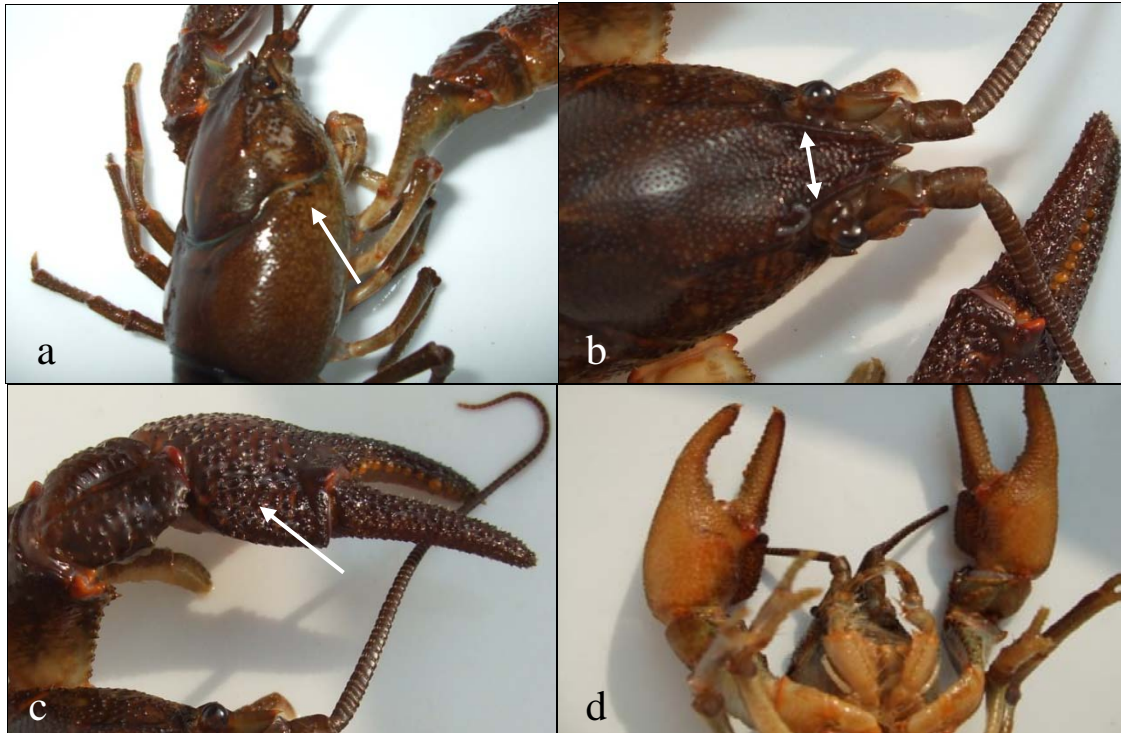


Fig. 1. *Austropotamobius torrentium*: **a/** area behind cervical groove; **b/** rostrum; **c/** chelae granulation; **d/** chelae under side.

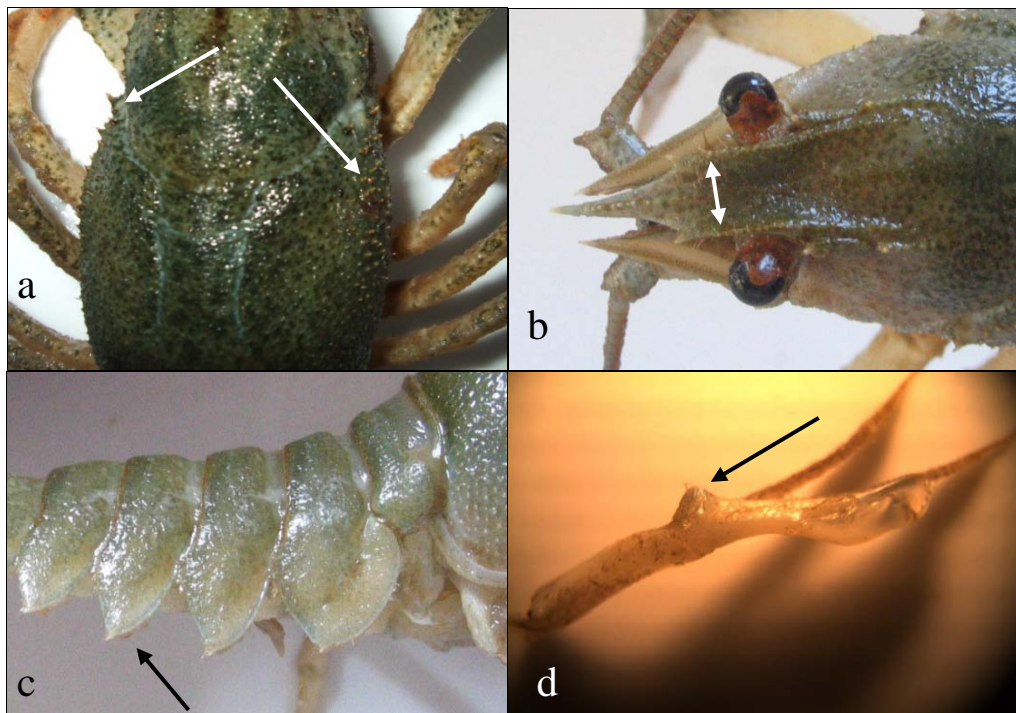


Fig. 2. *Astacus leptodactylus*: **a/** spines behind cervical groove; **b/** rostrum; **c/** abdominal pleura 2-4; **d/** second gonopod with talon.

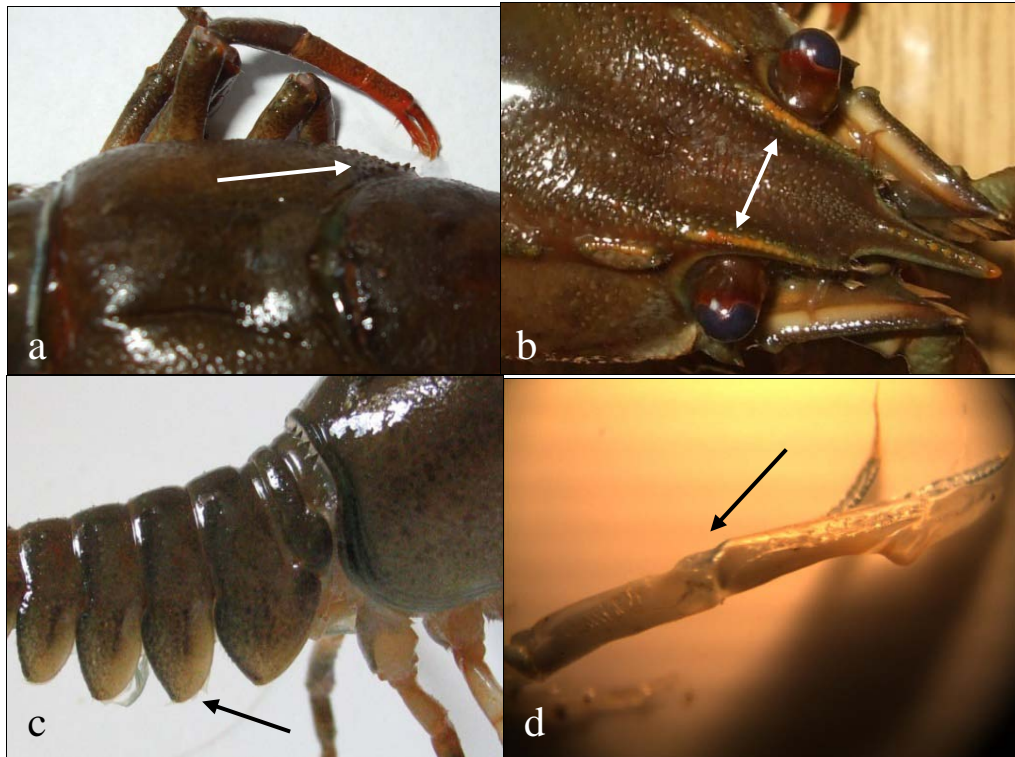


Fig. 3. *Astacus astacus*: **a/** spines behind cervical groove; **b/** rostrum; **c/** abdominal pleura 2-4; **d/** second gonopod.

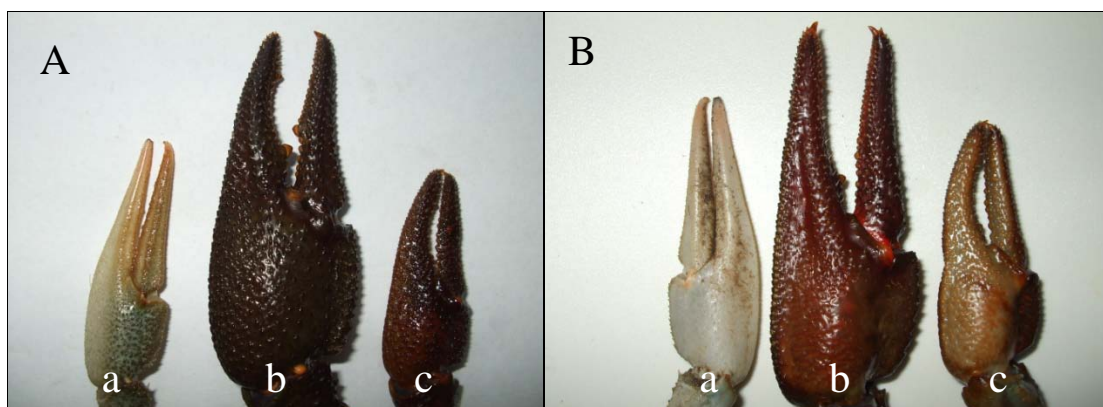


Fig. 4. Chelae: **A**-view from above; **B** -under side view
a/ *Astacus leptodactylus* ; **b/** *Astacus astacus* ; **c/** *Austropotamobius torrentium*.

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