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**Autor:** Kazanci, Nilgün

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## New *Drunella* (Ephemeroptera, Ephemerellidae) species from Turkey

NILGÜN KAZANCI

Hacettepe Üniversitesi, Fen Fakültesi, Biyoloji Bölümü  
Beytepe-Ankara, Türkiye

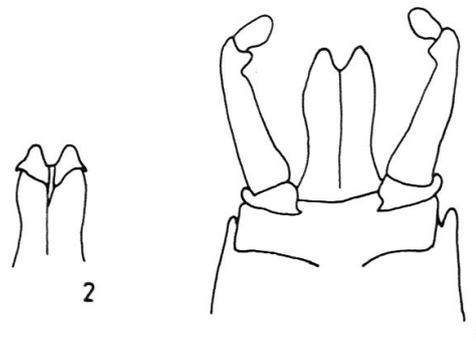
This paper includes descriptions of the mature nymph and the male imago of *Drunella euphratica* sp. n. The genus *Drunella* is cited in Turkey for the first time.

*Drunella euphratica* sp. n. (Figs. 1–12)

### *Male imago*

Length of body: 7–8 mm; length of fore wings: 6–8 mm. Head yellow, antennae light brown, eyes large and almost touching, dorsal portion of eyes yellow, ventral portion black. Pronotum yellow with small lateral black spots on the anterolateral and posterolateral margins. Meso and metanotum yellow. Metanotum yellowish brown in posterior portion. Thoracic sterna light brown. Prosternum paler. Wings colourless and transparent, wing venation yellow, costa light brown, fields between C and Sc milky. Legs yellow, femora with black, posterior spots. Abdomen yellowish brown, transparent. Tergites and sternites with black spots.

Gonopodes yellowish brown. The first segment of forceps with lateral projections, the second segment slightly bowed, the third segment two times as long as broad (fig. 1). Cerci light brown. Segments of cerci covered with short sparse hair. Penis lobes long and slender, pointed at the apex and beak shaped (fig. 2) in dorsal view.



Figs. 1–2: *Drunella euphratica* n. sp., male imago: 1. abdominal view of genitalia; 2. dorsal view of penis lobes.

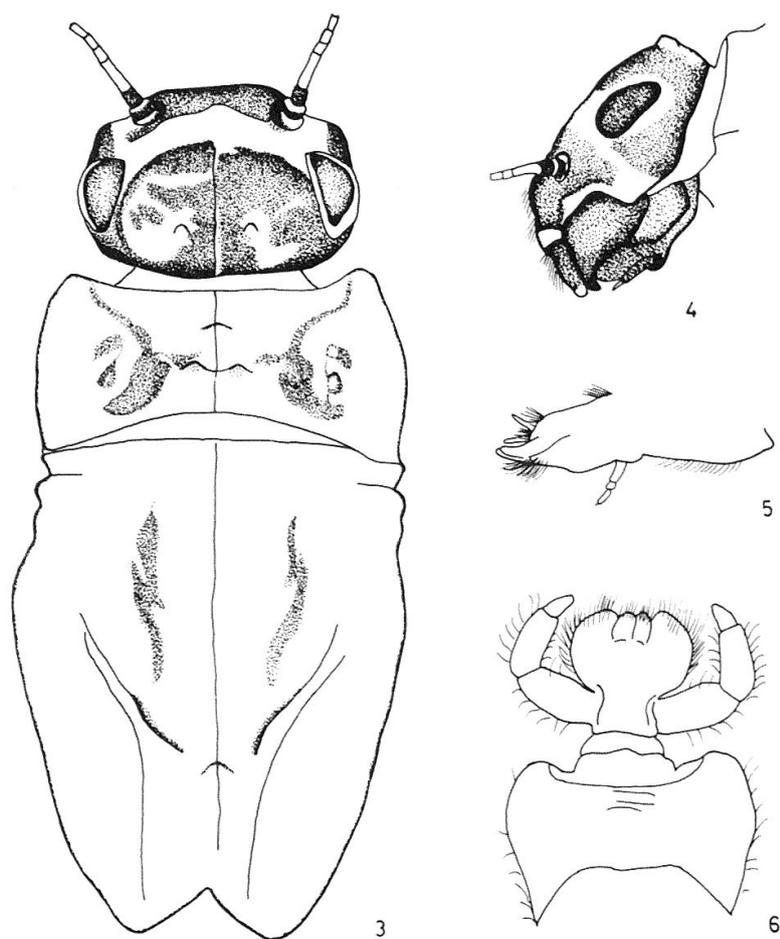
*Mature nymph*

Length of body: 5.5–9 mm; length of cerci: 5–6 mm. Head with small, distinctive occipital tubercles (figs. 3,4). Genae with blunt antero-lateral projections (fig. 3). Head light brown with yellow spots surrounding the occipital tubercles and eyes, with brown patterns between the eyes. Second segment of antennae brown, remainder are yellowish brown.

Mouth parts: Terminal segment of maxillary palpi with one apical spine (fig. 5). Glossae rounded at apex, paraglossae and submentum broad, anterolateral edges of submentum with distinctive projections (fig. 6).

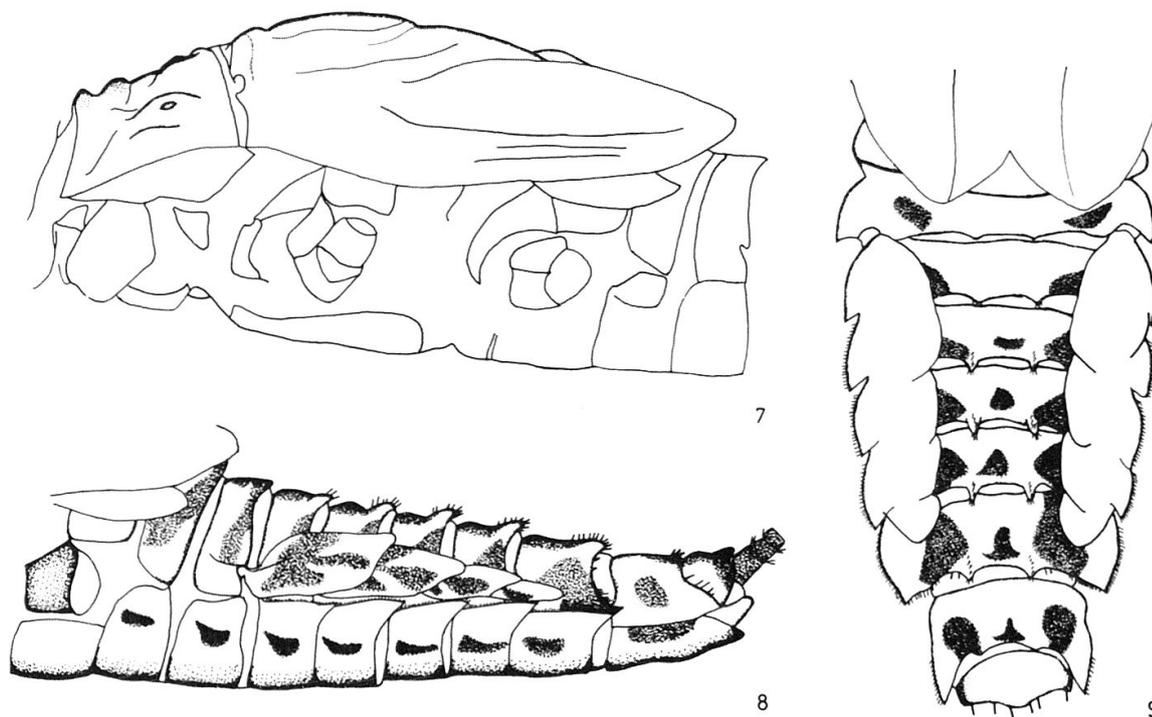
Thorax: pronotum brown with lateral, dark brown pattern on the lateral ridges. Pronotum with single median, paired, submedian tubercles, with paired submedian and lateral ridges (figs. 3,7). Anterior margin concave with projections on the anterolateral edges. Mesonotum with low paired submedian tubercles on the anterior margin, paired submedian ridges middle of mesonotum and a blunt single posterior tubercle between bases of wing pads (figs. 3,7).

Abdomen: Light brown with black spots. The abdominal tergites 3–9 with tubercles which are slightly divergent and covered with spines. Dorsal tubercles



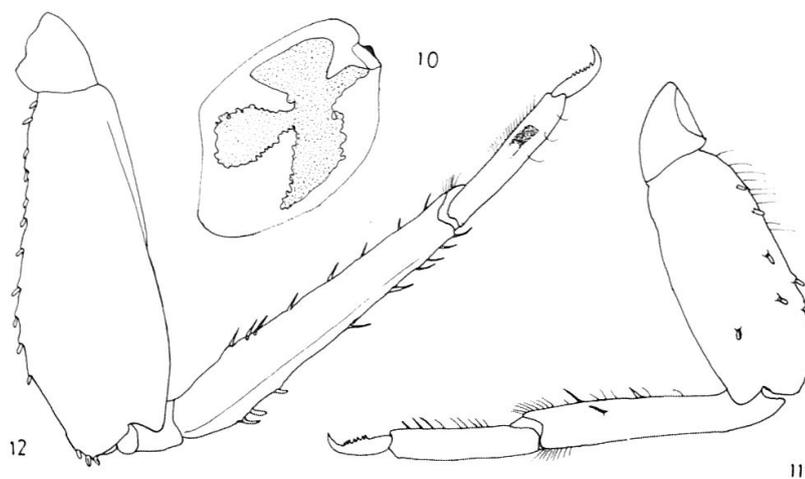
Figs. 3–6: *Drunella euphratica* n. sp., nymph: 3. dorsal view of head and thorax; 4. lateral view of head; 5. maxilla; 6. labium.

of tergites 2,3 and 9 smaller than remainder which are almost of equal size (figs. 8–9). Posterolateral margins of tergites 8–9 with spines. Posterolateral spines present between segment 3–9 which are covered with spines (figs. 8, 9).



Figs. 7–9: *Drunella euphratica* n. sp., nymph: 7. lateral view of thorax; 8. lateral view of abdomen; 9. dorsal view of abdomen.

Plate-like gills present on the tergites 3–7. Their posterior margin slightly concave (fig. 10). Caudal filaments dark brown with long spines on the posterior margin of alternate segments. Legs: Fore-femora with sparse spines on the outer margin and on the dorsal surface (fig. 11). Fore-tibiae and tarsi with pointed spines and long setae on the inner margin. Tarsal claws with 7 denticles (fig. 11).



Figs. 10–12: *Drunella euphratica* n. sp., nymph: 10 first lamellate gill; 11. first leg; 12. third leg.

Third femora with numerous spines (fig. 12). Third tibiae with long pointed spines on the outer and inner margin. Tarsi with long setae on the outer and inner margin. Tarsal claws with 6 denticles. Insertion of spines on the femora with tubercles. Male and female subimago and female imago unknown.

### *Affinities*

This new species belongs to the genus *Drunella* according to nymphal and adult characters as given by ALLEN & EDMUNDS (1962). *Drunella euphratica* sp. n. belongs to the *D. grandis* EATON group (ALLEN & EDMUNDS, 1962) and resembles *D. paradinasi* DEL TANAGO & DE JALON, 1983. However, the new species can easily be distinguished by the following characteristics in the nymphal stage: General body coloration, presence of lateral ridges on the pronotum, shapes of mesonotal ridges and tubercles, shape and number of paired dorsal tubercles which are covered with spines in the new species and are without spines in *D. paradinasi*, shape of mouth parts, legs with sparse spines and tubercles. The adult male of *D. paradinasi* is not known.

### *Material*

Holotype and 15 paratypes nymphs, Erzincan: Kemaliye: Yuva Village 1000 m, 9.7.1986 and 25 nymphs 3.8.1987; 6 ♂ imagines, Hakkari: Uludere: Uzungeçit Village, 1350 m, 20.7.1984; 2 nymphs, Hakkari: Şemdinli Road: Şine Mountain, 1050 m, 23.7.1984; 3 ♂ imagines, Hakkari: Katramaz Stream, 2000 m, 24.7.1984; 2 nymphs, Hakkari: Şemdinli, 1500 m, 26.7.1984; ♂ imago, Tunceli: Ovacik, 1350 m, 12.7.1986; 1 ♂ imago, Erzincan: Kemaliye: Tarhanik Stream, 1100 m, 11.7.1986; and 20 nymphs, 1.8.1987; Malatya: Beylerderesi Stream, 900 m, 31.7.1987; 9 nymphs, Malatya: Gündüzbeyi Village, 1150 m, 31.7.1987.

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### RÉSUMÉ

La nymphe et l'imago male de *Drunella euphratica* sp. n. sont décrites. Cette espèce du groupe *D. grandis* EATON est comparée à *D. paradinasi* DEL TANAGO & DE JALON qui est semblable. On a récolté le genre *Drunella* pour la première fois en Turquie.

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