Oniscidea are essentially a terrestrial group. Most troglobitic species belong to the family Trichoniscidae, the only family whose representatives also occur more or less regularly in cave waters.

Some epigean (or troglophilous) species are amphibious. However, in caves they have been found only in moist entrance habitats and never in water basins (Ligidium spp. e.g.). All species, found in cave waters, are completely depigmented and eyeless, true troglobites apparently bound to cave habitats. Unfortunately deciding which species are truly aquatic can be problematic. Only two (Canlabroniscus primitivus, Tylotricholigoides aquaticus) seem to be completely bound to aquatic habitats. They belong to the most primitive type of the family (Vandel 1966). The Mexiconiscus spp. apparently live on land only as juveniles and are aquatic as adults. The same should be true for some Brackenridgia spp., meanwhile other Brackenridgia spp. and Bureschia bulgarica enter water just slightly more regularly than some trichoniscids of the Dinaride caves. The listed Titanethes spp. and Illynonethes spp. are true terrestrial animals, but they are often found in water, where they sometimes even seek refuge when disturbed. Brackenridgia bridgesi can remain submerged "indefinitely" (Reddell) and Titanethes albus survived underwater for 9 months, when forced so (Potočnik). Only in Mexico do the Oniscidea seem to be sometimes important as biomass in water habitats.

No study has been carried out till now on the ecology or distribution of Oniscidea in cave waters. It is very probable that some data are still hidden in descriptions of caves and in other similar papers. In taxonomic papers the habitat is unfortunately seldom described. Since the epigean members of the family Ligiidae show some apparent tendency towards an amphibian life, it is very probable that their troglobitic relatives from Krym (Crimea) and from Kavkaz (Caucasus) have the same amphibiotic habits.

This compilation could not have been realized without personal communication with J. Reddel (Austin), F. Potočnik (Ljubljana), and R. Argano (Roma).

KEY REFERENCES


*Institut za biologijo Univerze, Aškerčeva 12, p.p. 141, 61001 Ljubljana, Yugoslavia.
1: *Cantabronicus primitius*, ♂, 12 mm (from Vandel 1966); 2: *Titanethes albus* (drawing by F. Potočnik).
Trichoniscidae
Sars, 1899

**Cantabroniscus**
Vandel, 1965

1 primitivus  
Vandel, 1965  
A (B)

**Scotoniscus**
Racovitza, 1908

2 macromelos  
Racovitza, 1908  
I 3: N slopes of Pyrenees.  
A (amph.)

**Titanethes**
Schioedte, 1849

3 albus  
Schioedte, 1849  
I 5a: westernmost parts of Venezia Giulia;  
I 7a: S of Ljubljana;  
I 7b: around Trieste;  
I 7c: in NW (Tounj).  
A (amph.)

4 dahlia  
Verhoeff, 1926  
I 5a: around Gorizia and Trieste;  
I 7a: extreme SW (N. Gorica — Divača);  
I 7b: northern parts;  
I 7c: NW parts (Gorski kotar).  
A (amph.)

5 biseriatus  
Verhoeff, 1900  
I 7d: SE parts.  
A (amph.)

**Cyphonethes**
Verhoeff, 1926

6 hercegovinensis  
Verhoeff, 1900  
I 7c: extreme E (Pelješac Peninsula is westernmost point).  
I 7d: extreme SE (Nevesinjsko polje is northernmost point).  
A (amph.)

**Alpioniscus**
Racovitza, 1908

7 bosniensis  
Frankenberger, 1939  
I 7c (SE): around Biokovo Mtn., and Vrgorac;  
I 7d (S): Duvno to Neretva River.  
A (amph.)

8 heroldii  
Verhoeff, 1931  
I 7c: extreme SE (near Dubrovnik);  
I 7d: extreme SE (Dabarsko polje is northernmost point).  
A (amph.)

**Macedonethes**
Buturović, 1955

9 skopjensis  
Buturović, 1955  
I 9b (W): Treska near Skopje.  
T (amph.)
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<td>Bureschia</td>
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<td>I 9a (W): cave Temnata dupka, and cave Vodnata dupka (Bulgaria).</td>
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<td>Rioja, 1953</td>
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<td>VII 1: cave Cueva del Ojo de Agua Grande (at Cordoba, Veracruz).</td>
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<td>Brackenridgia</td>
<td>Eigenmann et Ulrich, 1902</td>
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<tr>
<td>12</td>
<td>bridgesi</td>
<td>(Van Name, 1942)</td>
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<td>VII 1: in Sierra de El Abra and Sierra de Guatemala Mts. (San Luis Potosi and Tamaulipas).</td>
<td>A (amph.)</td>
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<td>VII 1: Mexico.</td>
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<td>Mexiconiscus</td>
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<td>13</td>
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<td>(Rioja, 1956)</td>
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<td>VII 1: Xilitla and Aquismon regions (San Luis Potosi).</td>
<td>A (amph.)</td>
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<td>VII 1: in Purificación area (Tamaulipas).</td>
<td>A (amph.)</td>
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<td>Trichoniscoides</td>
<td>Sars, 1899</td>
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<td>15</td>
<td>mixtus</td>
<td>Racovitza, 1908</td>
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<td>I 4/II 4: caves in French Jura.</td>
<td>A (amph.)</td>
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**NOTES**

In the tables “amph.” means “amphibiotic”.
2: numerous “subspecies”.
Brackenridgia: incl. Protrichoniscus
14: Reddell, in litt.