

Bull. Inst. r. Sci. nat. Belg. Bull. K. Belg. Inst. Nat. Wet.	Bruxelles Brussel	31-XII-1983
55	B I O L O G I E	4

CONTRIBUTIONS TO THE STUDY OF BELGIAN OSTRACODA

1. THE OSTRACODA FROM THE ENVIRONS OF BUZENOL
(Gaume District, Belgium)

BY

K. WOUTERS

(With one plate and one text-figure)

BULLETIN

Bull. Inst. r. Sci. nat. Belg. Bull. K. Belg. Inst. Nat. Wet.	Bruxelles Brussel	31-XII-1983
55	B I O L O G I E	4

CONTRIBUTIONS TO THE STUDY OF BELGIAN OSTRACODA

1. THE OSTRACODA FROM THE ENVIRONS OF BUZENOL
(Gaume District, Belgium)

BY

K. WOUTERS

(With one plate and one text-figure)

While studying the distribution of Belgian Ostracoda the author stayed (in May 1981) at the Biological Centre at Ethe-Buzenol (Prov. Luxemburg), situated in the southernmost part of Belgium, called the Gaume District, and collected ostracods from different types of environments. The Gaume District belongs to zone 8, the Western Middle Range, of ILLIES (1978). In the present paper a faunistical survey of the ostracods found in this area is given, together with comments on their actual distribution in Belgium. Seven of the sixteen species found are added to the known Belgian fauna. This is not surprising taking into account the fragmentary knowledge on the ostracods of Belgium.

SAMPLING STATIONS

Station 1 : Virton, small pond in the valley of the Rabais, near the crossing Chapelle du Bon Lieu and la Mère Dieu (18-V-1981).

Station 2 : Virton, in the sandy bottom of a spring called Fontaine de la Mère Dieu (18-V-1981).

Station 3 : Ethe, at the bank of a fast running small brook in a woodland (18-V-1981).

Station 4 : Ethe, small spring pond in a woodland S. of Chapelle du Bon Lieu (18-V-1981).

- Station 5: Ethe, in the shallow littoral zone of a large pond, « La Bouillonne », with muddy bottom (18-V-1981).
- Station 6: Ethe-Buzenol, in the inundated flood plain of the Gros Ruisseau, with dense vegetation, mainly consisting of Cyperaceae (18-V and 20-V-1981).
- Station 7: Ethe-Buzenol, « Cron de Montauban », a fast running calcareous tufa forming brook; sample collected in small pools on the slope of the hill (19-V-1981).
- Station 8: Robelmont, in the sandy bottom of a spring near the Ruisseau de la Vau Saint Jean (19-V-1981).
- Station 9: Chantemelle, marshes of Chantemelle, in a small pond with Cyperaceae, *Caltha palustris* and reed (20-V-1981).
- Station 10: Vance, marshes of Villers Tortru, in an almost stagnant brook with reed detritus (20-V-1981).
- Station 11: Saint-Léger, about 150 m S.E. of Chapelle Saint Joseph, in a small pond with a dense vegetation of Characeae (21-V-1981).
- Station 12: Ethe, in a narrow calcareous tufa forming brook, about 100 m N.W. of the source, near the Ruisseau de Fréchi, in a pine forest (21-V-1981).
- Station 13: Ethe-Buzenol, manmade pond interconnecting the Ruisseau de Fréchi and Gros Ruisseau, in a pine forest (21-V-1981).
- Station 14: Ethe, shallow marshes with a central pond S.E. of the Bâr farmyard (21-V-1981).
- Station 15: Ethe, between the vegetation on the bank of the fast running Ruisseau du Cron, a calcareous tufa forming brooklet (22-V-1981).

DISTRIBUTION OF THE SPECIES

Candona candida (O. F. MÜLLER, 1785)

It occurs in stagnant or slowly running waters, on muddy bottoms. It is a common species in the studied area and in Belgium. All the collected specimens are females. Males have only once been recorded in Belgium, from Chertal by ROME (1954).

Candona marchica HARTWIG, 1899

(Pl. I, fig. 1a, 1b)

Seven females and two males in the inundated flood plain of the Gros Ruisseau. *C. marchica* has never been found in Belgium before, and therefore this species is new to the Belgian fauna.

Candona neglecta SARS, 1887

Only three specimens were found living on the soft bottom of a small affluent of the Ruisseau de Fréchi. It is a fairly common species in Belgium. It is known from caves (LERUTH, 1939), canals, meadow ditches, oligohaline creeks, ponds and marshes.

Candona fabaeformis FISCHER, 1854

Five specimens have been found in the inundated flood plain of the Gros Ruisseau, and one specimen in the marshland of the Ruisseau du Cron. This species has also been found in a pond at Chertal (LELOUP et al., 1954), in two ponds at Leuven (ROME, 1947 and 1954) and recently in a slightly brackish pool at Hoboken (MARTENS, 1982).

Cryptocandona vavrai (KAUFMANN, 1900)

(Fig. 1; Pl. I, fig. 2a, 2b, 2c)

Two females in a spring pond next to the Ruisseau du Rabais and one female with soft parts and two valves in a small ditch of the Chantemelle marshes. The species occurs also in the Enfants-Noyés pond at Watermaal-Bosvoorde near Brussels. *C. vavrai* is new to Belgium. This rare species has also been recorded and fully redescribed from Weiswampach (Grand Duchy of Luxemburg) by EICHHORN (1968, p. 211).

Cyclocypris ovum (JURINE, 1820)

A very common species in the Buzenol area, occurring mostly in ponds and rarely in (slowly) running waters. A common species throughout Belgium.

Cypria ophthalmica (JURINE, 1820)

A very common species in the Buzenol area; distribution comparable to the distribution of *Cyclocypris ovum*. Very common in Belgium.

Ilyocypris bradyi SARS, 1890

The species is not uncommon in the Gaume District; it has been found twice on the sandy bottom of a spring (La Mère Dieu and Robelmont), twice on the soft bottom of a pond (La Bouillonne and pond inter-connecting the Ruisseau de Fréchi and Gros Ruisseau), and once in the

marshland of the Ruisseau du Cron, a brooklet with calcareous tufa. This species is also known from two ponds at Leuven (ROME, 1947 and 1954), from a castle-moat at Wezembeek (ROME, 1954), from an oligohaline creek at Zandvoorde and from a ditch in a forest at Heverlee.

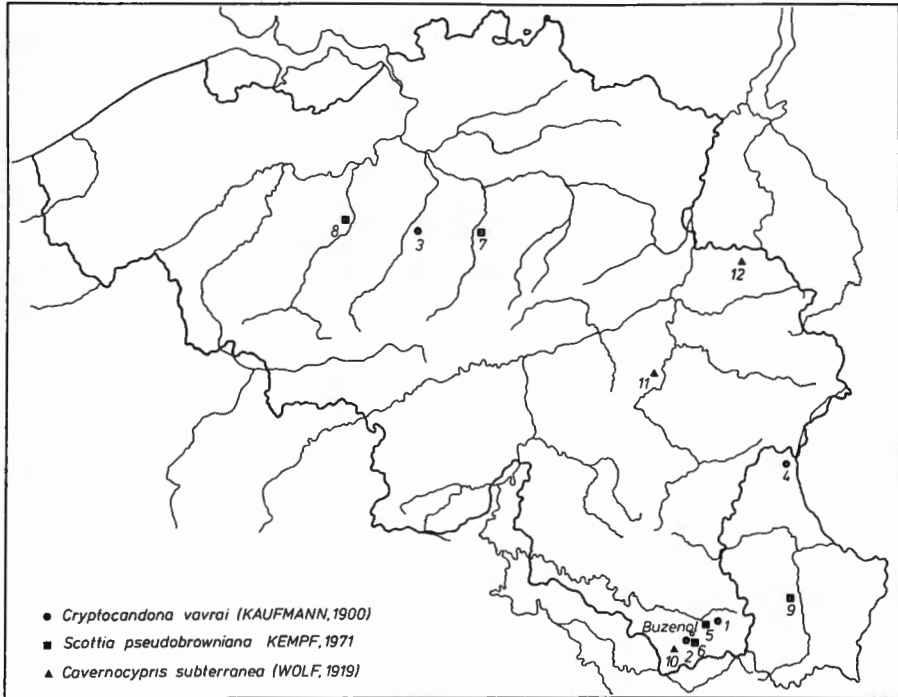


Fig. 1. — Distribution of three fresh-water ostracods in Belgium and in the Grand Duchy of Luxemburg. 1 and 5: Chantemelle; 2 and 10: Ethe; 3: Watermaal-Bosvoorde; 4: Weiswampach (EICHHORN, 1968); 6: Ethe-Buzenol; 7: Oud-Heverlee; 8: Denderleeuw; 9: Hunnebour (EICHHORN, 1968); 11: Tohogne (KLIE, 1937); 12: Hombourg.

Eucypris pigra (FISCHER, 1851)

Numerous specimens in the inundated flood plain of the Gros Ruisseau. Although it is a very common species in Europe, this is the first record in Belgium. In our collection we have also material from the following localities: Chevron (meadow pool), Denderleeuw (spring pond), Erezée (spring brook), Hastière (pond), Hermeton (pond) and Lessines (small river in a woodland).

Bradleycypris affinis (FISCHER, 1851)

Found at five localities in the Gaume District, in pools and ponds. It is a fairly common species throughout Belgium.

In the past this species has been assigned by most authors to the Southern African genus *Cypricercus* SARS, 1895. Recently, however, MCKENZIE (1982, p. 415) introduced the genus *Bradleycypris* for the northern hemisphere species formerly placed in the genus *Cypricercus*. From the fourteen species assigned by MCKENZIE to the genus *Bradleycypris*, three occur also in Belgium, namely: *B. obliquus* (BRADY, 1868) (the type-species of the genus), *B. affinis* (FISCHER, 1851) and *B. fuscatus* (JURINE, 1820).

Herpetocypris reptans (BAIRD, 1835)

One specimen in the inundated flood plain of the Gros Ruisseau, amongst plants. It is a common species in Belgium and has been found in ditches with detritus of dead leaves or with dense vegetation, near the banks of rivers and lakes, in ponds, mostly in association with organic detritus or with vegetation.

Psychodromus olivaceus (BRADY and NORMAN, 1889)

(Pl. I, fig. 3)

One specimen has been found in the inundated flood plain of the Gros Ruisseau, fifteen specimens in the « Cron de Montauban », a calcareous tufa forming spring brook, one specimen in a spring brook in a pine forest and more than twenty specimens in the Ruisseau du Cron, a calcareous tufa forming spring brook. Although the species is not rare, this is the first official record for Belgium. In our collections we have also material of this species from the following Belgian localities: Brussels, Denderleeuw, Neerijse, Oud-Heverlee, Tervuren and Vossem, always in springs or in brooks or small rivers in connection with springs.

Cavernocypris subterranea (WOLF, 1919)

(Fig. 1; Pl. I, fig. 5a, 5b)

Five females were found in the sandy bottom of a shallow fast running brook in a woodland. This species is already known from a spring at Tohogne (KLIE, 1937 and LERUTH, 1939). Very recently (1981) J. NOTENBOOM (Amsterdam) collected numerous specimens of *C. subterranea* in two wells at Hombourg (Prov. Liège), in the valley of the Gulpe. The species is assigned here to the genus *Cavernocypris* HARTMANN, 1964, because of the striking resemblance of its valves with those of *Cavernocypris lindbergi* HARTMANN, 1964, the type-species. On the basis of the soft parts (HARTMANN, 1964, p. 68) the genus *Cavernocypris* belongs to the Cypridopsini. It has to be stressed, however, that in contrast to *C. subterranea*, *C. lindbergi* lacks a furca.

TABLE 1

Synoptic table of the distribution of Ostracoda in the Gaume District.

VR = very rare (1 to 5 specimens); R = rare (6 to 20 specimens); C = common (more than 20 specimens).

Species	Stations														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Candona candida</i> (O. F. MÜLLER)	—	—	—	—	R	VR	—	—	—	—	VR	—	R	VR	—
<i>Candona marchica</i> HARTWIG	—	—	—	—	—	R	—	—	—	—	—	—	—	—	—
<i>Candona neglecta</i> SARS	—	—	—	—	—	—	—	—	—	—	—	VR	—	—	—
<i>Candona fabaeformis</i> FISCHER	—	—	—	—	—	VR	—	—	—	—	—	—	—	—	VR
<i>Cryptocandona vavrai</i> (KAUFMANN)	—	—	—	VR	—	—	—	—	VR	—	—	—	—	—	—
<i>Cyclocypris ovum</i> (JURINE)	C	VR	—	—	R	C	—	—	—	—	VR	—	R	C	VR
<i>Cypria ophthalmica</i> (JURINE)	—	—	—	—	VR	R	—	—	C	—	—	—	R	R	C
<i>Ilyocypris bradyi</i> SARS	—	R	—	—	R	—	—	R	—	—	—	—	R	—	VR
<i>Eucypris pigra</i> (FISCHER)	—	—	—	—	—	C	—	—	—	—	—	—	—	—	—
<i>Bradleycypris affinis</i> (FISCHER)	—	—	—	—	—	C	—	—	—	VR	—	—	—	VR	—
<i>Herpetocypris reptans</i> (BAIRD)	—	—	—	—	—	VR	—	—	—	—	—	—	—	—	—
<i>Psychodromus olivaceus</i> (BRADY and NORMAN)	—	—	—	—	—	VR	R	—	—	—	—	VR	—	—	C
<i>Cavernocypris subterranea</i> (WOLF)	—	—	R	—	—	—	—	—	—	—	—	—	—	—	—
<i>Potamocypris villosa</i> (JURINE)	R	—	—	—	VR	—	—	—	—	—	—	—	—	—	—
<i>Potamocypris wolfi</i> BREHM	—	—	—	—	—	—	R	—	—	—	—	R	—	—	—
<i>Scottia pseudobrowniana</i> KEMPF	—	—	—	—	—	—	—	—	VR	—	—	—	—	—	VR

Potamocypris villosa (JURINE, 1820)

Five specimens have been found in the pond « La Bouillonne » at Ethe. This species is probably not rare in Belgium, but data on its distribution are lacking. It is only known from Mirwart (PIERRE, 1973) and from ponds at Tervuren.

Potamocypris wolfi BREHM, 1920

(Pl. I, fig. 4a, 4b, 4c)

Ten specimens have been found in the « Cron de Montauban », a calcareous tufa forming spring brook. Although the species is not uncommon in springs this is the first published record for Belgium. In our collections we have material of this species from the following localities : Hastière, Tervuren, Vossem, Oud-Heverlee and Denderleeuw.

Scottia pseudobrowniana KEMPF, 1971

(Fig. 1; Pl. I, fig. 6)

One right valve has been found in a pond at Chantemelle and one empty carapace in the bottom sediment of the Ruisseau du Cron at Ethe-Buzenol. Rare living specimens of this species have recently been collected in Belgium in a spring at Oud-Heverlee and in a spring at Denderleeuw. From the latter locality more than 200 empty valves were collected, but even after repeated sampling during the year only one juvenile and one adult were caught. The species was hitherto unknown in Belgium, and can therefore be added to the Belgian fauna. The species seems to be rare throughout, as already stressed by EICHHORN (1968, p. 223) when describing it from Hunnebour (Grand Duchy of Luxemburg). The distribution of *Scottia* is amply discussed by KEMPF (1971).

ACKNOWLEDGEMENTS

I am indebted to my colleague Mr. A. HULOT, conservator of the « Centre Ethe-Buzenol » of the Institut Royal des Sciences Naturelles de Belgique for his advice and help during my stay at the centre. I am most grateful to Mr. J. NOTENBOOM (Amsterdam) for offering me his ostracod collections from the Gulpe valley to study. Sincere thanks are due to Dr. C. HASKINS for critically reading the manuscript.

RESUME

Les ostracodes récoltés dans différents biotopes dulçaquicoles de Buzenol et de ses environs (Gaume), ont été étudiés. Seize espèces ont été trouvées

dont sept sont nouvelles pour la faune belge : *Candona marchica* HARTWIG, *Cryptocandona vavrai* (KAUFMANN), *Eucypris pigra* (FISCHER), *Psychodromus olivaceus* (BRADY et NORMAN), *Cavernocypris subterranea* (WOLF), *Potamocypris wolffi* BREHM et *Scottia pseudobrowniana* KEMPF.

SAMENVATTING

De Ostracoda verzameld in diverse zoetwaterbiotopen te Buzenol en omgeving (Gaume) werden bestudeerd. Van de zestien gevonden soorten zijn er zeven nieuw voor de Belgische fauna, namelijk : *Candona marchica* HARTWIG, *Cryptocandona vavrai* (KAUFMANN), *Eucypris pigra* (FISCHER), *Psychodromus olivaceus* (BRADY en NORMAN), *Cavernocypris subterranea* (WOLF), *Potamocypris wolffi* BREHM en *Scottia pseudobrowniana* KEMPF.

Koninklijk Belgisch Instituut voor Natuurwetenschappen
Recent Invertebrates Section
Vautierstraat 29, B-1040 Brussels, Belgium.

REFERENCES

- EICHHORN, A.
1968. *Cryptocandona vavrai*, KAUFM. et *Scottia browniana*, JONES, deux rares Ostracodes (Crustacea) du Grand-Duché de Luxembourg. — *Archs Sect. Sci. gr.-duc. Luxemb.*, N.S., 33, 211-223.
- HARTMANN, G.
1964. Asiatische Ostracoden. Systematische und Zoogeografische Untersuchungen. — *Int. Revue ges. Hydrobiol., Syst. Beih.*, 3, 1-154.
- ILLIES, J.
1978. Limnofauna Europea, second revised and enlarged edition, 1-532. — *G. Fischer Verlag, Stuttgart*.
- KEMPF, E.
1971. Ökologie, Taxonomie und Verbreitung der nichtmarinen Ostracoden-Gattung *Scottia* im Quartär von Europa. — *Eiszeitalter Gegenw.*, 22, 43-63.
- KLIE, W.
1937. Etudes biospéologiques. III. Weitere Ostracoden aus dem Grundwasser von Belgien. — *Bull. Mus. r. Hist. nat. Belg.*, 13 (4), 1-6.
- LELOUP, E., VAN MEEL L. and JACQUEMART, S.
1954. Recherches hydrobiologiques sur trois mares d'eau douce des environs de Liège. — *Mém. Inst. r. Sci. nat. Belg.*, 131, 1-145.
- LERUTH, R.
1939. La biologie du Domaine souterrain et la Faune cavernicole de la Belgique. — *Mém. Mus. r. Hist. nat. Belg.*, 87, 1-506.
- MARTENS, K.
1982. On some freshwater Ostracods (Crustacea, Ostracoda) from Hoboken polder, including *Potamocypris unicaudata* SCHÄFER and *Potamocypris smaragdina* (VAVRA), two new species for the Belgian fauna. — *Biol. Jaarb.*, 50, 124-134.
- McKENZIE, K.
1982. Homeomorphy: Persistent joker in the taxonomic pack, with the description of *Bradleycypris* gen. nov. In: BATE, R., ROBINSON, E. and SHEPPARD, L., Fossil and Recent Ostracods, 407-438. — *E. Horwood Ltd., Chichester*.

PIERRE, D.

1973. Etude écologique comparée des populations d'ostracodes dans deux étangs de pisciculture en Haute Belgique. — *Hydrobiologia*, 43 (3-4), 273-284.

ROME, D. R.

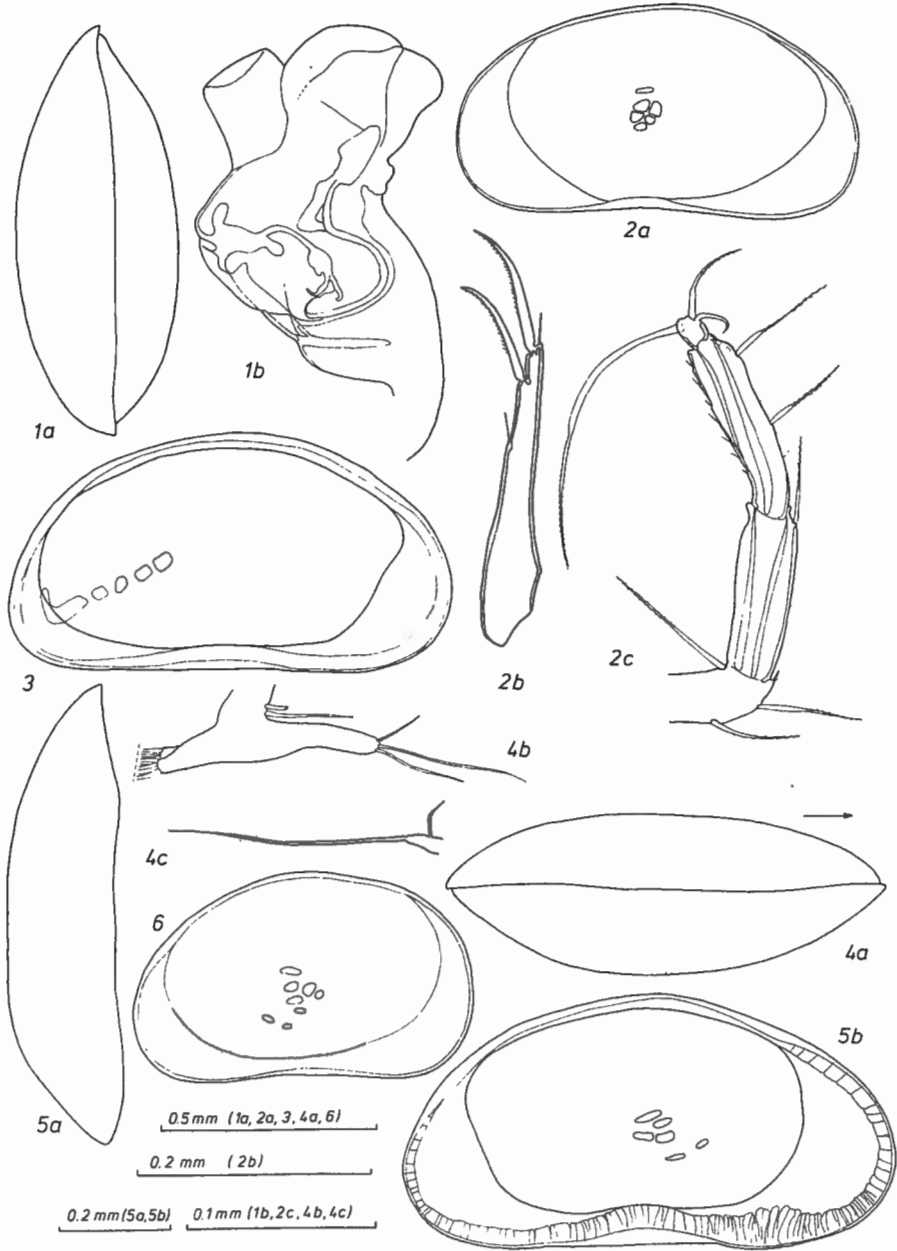
1947. Contribution à l'étude des ostracodes de Belgique. I. — Les Ostracodes du Parc St. Donat à Louvain. *Herpetocypris lenta* sp. nov. et *Isocypris quadrisetosa* sp. nov. — *Bull. Mus. r. Hist. nat. Belg.*, 23 (34), 1-24.

1954. Contribution à l'étude des ostracodes de Belgique. II. Espèces rares et espèces nouvelles. — *Bull. Mus. r. Hist. nat. Belg.*, 30 (3), 1-32.

EXPLANATION OF PLATE

PLATE I

- Fig. 1a. — *Candona marchica* HARTWIG, female carapace, dorsal view; Gros Ruisseau, Ethe-Buzenol (stat. 6).
- Fig. 1b. — *Candona marchica* HARTWIG, copulatory appendage; Gros Ruisseau, Ethe-Buzenol, (stat. 6).
- Fig. 2a. — *Cryptocandona vavrai* (KAUFMANN), female right valve, internal view; Chantemelle (stat. 9).
- Fig. 2b. — *Cryptocandona vavrai* (KAUFMANN), female, furca; spring pond, Ethe (stat. 4).
- Fig. 2c. — *Cryptocandona vavrai* (KAUFMANN), female, cleaning limb; spring pond, Ethe (stat. 4).
- Fig. 3. — *Psychodromus olivaceus* (BRADY and NORMAN), female left valve, internal view; Ruisseau du Cron, Ethe (stat. 15).
- Fig. 4a. — *Potamocypris wolffi* BREHM, female carapace, dorsal view; Cron de Montauban, Ethe-Buzenol (stat. 7).
- Fig. 4b. — *Potamocypris wolffi* BREHM, female, first thoracopod; Cron de Montauban, Ethe-Buzenol (stat. 7).
- Fig. 4c. — *Potamocypris wolffi* BREHM, female, furca; Cron de Montauban, Ethe-Buzenol (stat. 7).
- Fig. 5a. — *Cavernocypris subterranea* (WOLF), female left valve, dorsal view; Ethe (stat. 3).
- Fig. 5b. — *Cavernocypris subterranea* (WOLF), female left valve, internal view; Ethe (stat. 3).
- Fig. 6. — *Scottia pseudobrowniana* KEMPF, female left valve, internal view; Chantemelle (stat. 9).



K. WOUTERS. — Contributions to the study of Belgian Ostracoda.
1. The Ostracoda from the environs of Buzenol.