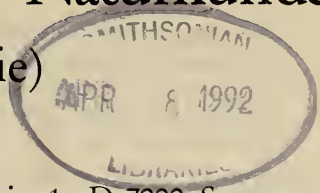


# Stuttgarter Beiträge zur Naturkunde

## Serie A (Biologie)

Herausgeber:

Staatliches Museum für Naturkunde, Rosenstein 1, D-7000 Stuttgart 1



Stuttgarter Beitr. Naturk.

Ser. A

Nr. 463

9 S.

Stuttgart, 30. 8. 1991

## The Terrestrial Isopod Genus *Chaetophiloscia* in Western Asia (Oniscidea: Philosciidae)

By Helmut Schmalzfuss, Stuttgart

With 21 figures

### Summary

The Asiatic representatives of the genus *Chaetophiloscia* Verhoeff, 1908 are revised. *Chaetophiloscia almana*, *Ch. cellaria*, *Ch. elongata aharonii*, *Ch. elongata cypriotes*, *Ch. hastata*, *Ch. kinzelbachi* and *Ch. lagoi* are recognized as valid taxa. *Ch. warburgi* n. sp. is described from Israel. *Ch. syriaca* und *Ch. elongata aramensis* are considered synonyms of *Ch. elongata aharonii*.

### Zusammenfassung

Die asiatischen Vertreter der Gattung *Chaetophiloscia* Verhoeff, 1908 werden revidiert. *Chaetophiloscia almana*, *Ch. cellaria*, *Ch. elongata aharonii*, *Ch. elongata cypriotes*, *Ch. hastata*, *Ch. kinzelbachi* und *Ch. lagoi* werden als valide Taxa betrachtet. *Ch. warburgi* n. sp. wird aus Israel beschrieben. *Ch. syriaca* und *Ch. elongata aramensis* werden als Synonyme von *Ch. elongata aharonii* ausgewiesen.

### 1. Introduction

*Chaetophiloscia* Verhoeff, 1908 is a mediterranean genus of terrestrial isopods, ranging from the Macaronesian Islands to Western Asia. Only one species, *Ch. hastata*, breaks out of the Mediterranean proper, populating also the Caucasus Region and Iraq („*Chaetophiloscia*“ *starostini* Borutzky, 1953 from Tadzhikistan does not belong to *Chaetophiloscia*). All other species are restricted to coastal regions of the Mediterranean Sea and to the Macaronesian Islands in the Western Atlantic.

In the present paper the Asiatic representatives of the genus are revised and new collections are treated. Some of the Asiatic records have been published in a recent revision of the Greek species of *Chaetophiloscia* (SCHMALFUSS 1990). For localities, maps and figures of the diagnostic characters of these species, and for a diagnose of the genus this publication should be consulted.

The following Asiatic taxa are considered valid species:

- Ch. almana* Verhoeff & Strouhal, 1967,
- Ch. cellaria* (Dollfus, 1884),

- Ch. elongata* (Dollfus, 1884),  
*Ch. hastata* Verhoeff, 1928,  
*Ch. kinzelbachi* Schmalfuss, 1986,  
*Ch. lagoi* (Arcangeli, 1934),  
*Ch. warburgi* n. sp.

Safe specific identifications are possible only for ♂♂, therefore samples containing only ♀♀ and references not clearly based on ♂♂ are not considered in the following list.

In the case of *Chaetophiloscia elongata* two subspecies are distinguished, which exhibit some conspicuous differences compared with the European populations. Perhaps they deserve species rank, but as long as the situations of this group in Western Turkey is not clarified (no records certainly due to collecting gaps) I prefer to treat these as subspecies of *Ch. elongata*.

The members of the genus *Chaetophiloscia* are populating macchia and open woodland biotopes. *Ch. cellaria* is often found in caves. In Israel three species have been found syntopically, indicating a pronounced differentiation of nutritional preferences that allows co-existence.

*Abbreviations* used: *SMF* = Senckenberg-Museum Frankfurt/M.; – *SMNS* = Staatliches Museum für Naturkunde Stuttgart; – *ZSM* = Zoologische Staatssammlung München.

## 2. Asiatic species of *Chaetophiloscia*

### 2.1. *Chaetophiloscia almana* Verhoeff & Strouhal, 1967 (Figs. 1–3)

*Chaetophiloscia almana*: VERHOEFF & STROUHAL 1967: 480, 482, figs. 10–11.

Specimens examined: 1 ♂, slide preparation (hololectotype, herewith designated), 4 ♀♀ (paralectotypes), southern Turkey, Antakya district, „Alma Dag“, leg. KOSSWIG 4. II. 1942 (ZSM, VERHOEFF & STROUHAL 1967).

*Distribution*: Known only from the type locality in southern Turkey.

*Remarks*: The pleopod-exopodite is missing in the type-specimen, pleopod-endopodite I and exopodite V see Figs. 1–3.

### 2.2. *Chaetophiloscia cellaria* (Dollfus, 1884) (Figs. 4–5)

*Chaetophiloscia pseudocellaria coiffaiti*: VANDEL 1955: 492, fig. 24.

? *Chaetophiloscia solerii*: VANDEL 1965: 821, figs. I–III;

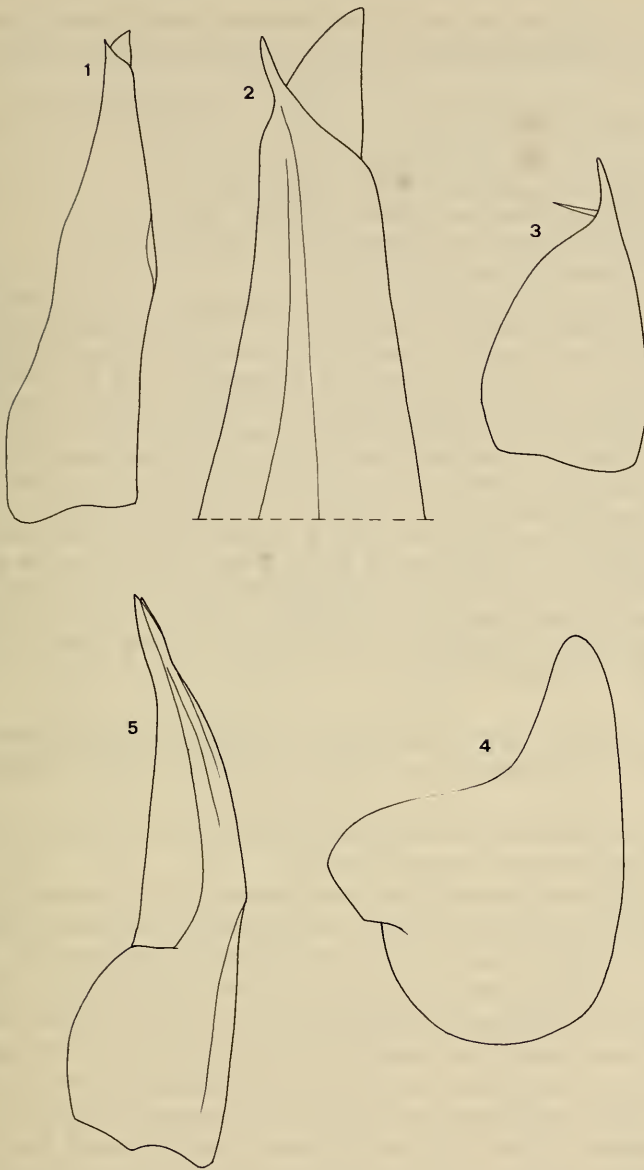
STROUHAL 1968: 315.

*Chaetophiloscia cellaria coiffaiti*: SCHMALLFUSS 1986: 5.

Specimens examined: 2 ♂♂, 1 ♀, S-Turkey, Taurus Mts., Vilyat Burdur, cave 2.5 km NW Yesilova, 1500 m, leg. NOTENBOOM et alii 21. V. 1987 (SMNS 11265, further specimens in the Zoological Museum Amsterdam).

*Distribution*: Northern Mediterranean from Spain to Lebanon. In Western Asia records from S-Turkey (see above), Lebanon (VANDEL 1955 as *Ch. pseudocellaria coiffaiti*) and probably Cyprus (VANDEL 1965 as *Ch. solerii*).

*Remarks*: VANDEL (1955) described „*Chaetophiloscia pseudocellaria coiffaiti*“ from a cave in Lebanon, differing from European *cellaria*-populations by a pronounced medio-distal lobe in the pleopod-exopodite I ♂. The Turkish specimens presently examined have an exopodite I intermediate between the Lebanese specimens and the European populations (Fig. 4). Future records from the area between Greece and Lebanon have to show whether *coiffaiti* can be separated as a „reason-



Figs. 1–3. *Chaetophiloscia almana*; holotype, ♂, original slide preparation of VERHOEFF. — 1. Pleopod-endopod I, — 2. Pleopod-endopod I, apex, — 3. Pleopod-exopod V.

Figs. 4–5. *Chaetophiloscia cellaria*; ♂, S-Turkey (SMNS 11265). — 4. Pleopod-exopod I, — 5. Pleopod-endopod I.

able“ subspecies. The record of „*Chaetophiloscia solerii*“ from Cyprus (VANDEL 1965) seems to correspond perfectly to the *cellaria*-populations of the Aegean.

### 2.3. *Chaetophiloscia elongata abaronii* Verhoeff, 1923 (Figs. 6–12)

*Chaetophiloscia abaronii*: VERHOEFF 1923: 229, figs. 12–13.

*Chaetophiloscia syriaca*: VERHOEFF 1949: 41, figs. 24–25.

*Chaetophiloscia elongata aramensis*: VANDEL 1955: 490, fig. 23.

*Chaetophiloscia* sp.: STROUHAL & PRETZMANN 1975: 648, figs. 27–30.

*Chaetophiloscia elongata*: SCHMALFUSS 1986: 5.

Specimens examined: 1 ♂, slide preparation (syntype of *Ch. abaronii*), Israel, Lake Genezareth, leg. AHARONI (ZSM, VERHOEFF 1923). – 1 ♂, slide preparation, 1 ♀, (syntypes of *Ch. syriaca*), S-Turkey, Elma Dağı near Hatay = Antakya, leg. KOSSWIG (ZSM, VERHOEFF 1949 as *Ch. syriaca*). – 1 ♂, Syria, Homs, leg. KINZELBACH et alii III. 1979 (SMNS 11102, SCHMALFUSS 1986). – 1 ♂, 2 ♀♀, SW-Syria, 25 km N Dar'a (= Deraa), Nahr-al-Harir, leg. KINZELBACH et alii 25. III. 1977 (SMNS 11056, SCHMALFUSS 1986). – 2 ♂♂, NW-Syria, W Homs, Castle Krak des Chevaliers, Qala al-Husn, leg. KINZELBACH et alii 8. III. 1979 (SMNS 11086, SCHMALFUSS 1986). – 1 ♂, Israel, Lower Galil, 15 km NW Nazareth, Ha Solelim, 200 m, leg. SCHAWALLER & SCHMALFUSS 7. II. 1987 (SMNS 11292). – 2 ♂♂, Israel, SE Haifa, Allonim, 200 m, leg. SCHAWALLER & SCHMALFUSS 7. II. 1987 (SMNS 11293). – 3 ♂♂, 1 ♀, Israel, Lower Galil, 3 km W Segev, 200 m, leg. SCHAWALLER & SCHMALFUSS 9. II. 1987 (SMNS 11297). – 1 ♂, 6 ♀♀, Israel, SE Haifa, Mt. Carmel, northern slope, 300 m, leg. SCHAWALLER & SCHMALFUSS 8. II. 1987 (SMNS 11298). – 1 ♂, Israel, SE Mt. Carmel, SW Elyaqim, 300 m, leg. SCHAWALLER & SCHMALFUSS 11. II. 1987 (SMNS 11296). – 1 ♂, 2 ♀♀, Israel, SW Jerusalem, Matta, 600 m, leg. SCHAWALLER & SCHMALFUSS 19. II. 1987 (SMNS 11295).

Further safe records from Western Asia: Lebanon: „Dahr el Baidar“ (VANDEL 1955). – Israel: Mt. Carmel, Hadar (STROUHAL & PRETZMANN 1975 according to the figures).

Distribution: Known from the Gulf of Iskenderun in southern Turkey to central Israel in mediterranean macchia biotopes.

Remarks: Re-examination of the type-specimens of *Ch. abaronii* Verhoeff, 1923 and *Ch. syriaca* Verhoeff, 1949, and the investigation of numerous ♂♂ from Syria and Israel led to the conclusion of *Ch. syriaca* being a synonym of *Ch. abaronii*. The different shape of the pleopod-endopodite I of the type-♂ (Figs. 6–8) seems to be due to inappropriate treatment for slide preparation. The ♂♂ from Israel and Syria presently examined possess an endopodite rather like *syriaca* of a somewhat more slender shape but never as thin as in the type-♂ of *abaronii*, which seems to have undergone artificial shrinkage. Concerning other diagnostic characters, e.g. shape of pleopod-exopodite I ♂ and V ♂ no differences could be found. Furthermore, *Ch. elongata aramensis* Vandel, 1955 has to be considered a synonym of *abaronii*, too. The question whether *abaronii* should be treated as a subspecies of *elongata* or rather as a different species can be solved only when samples from western Turkey are available.

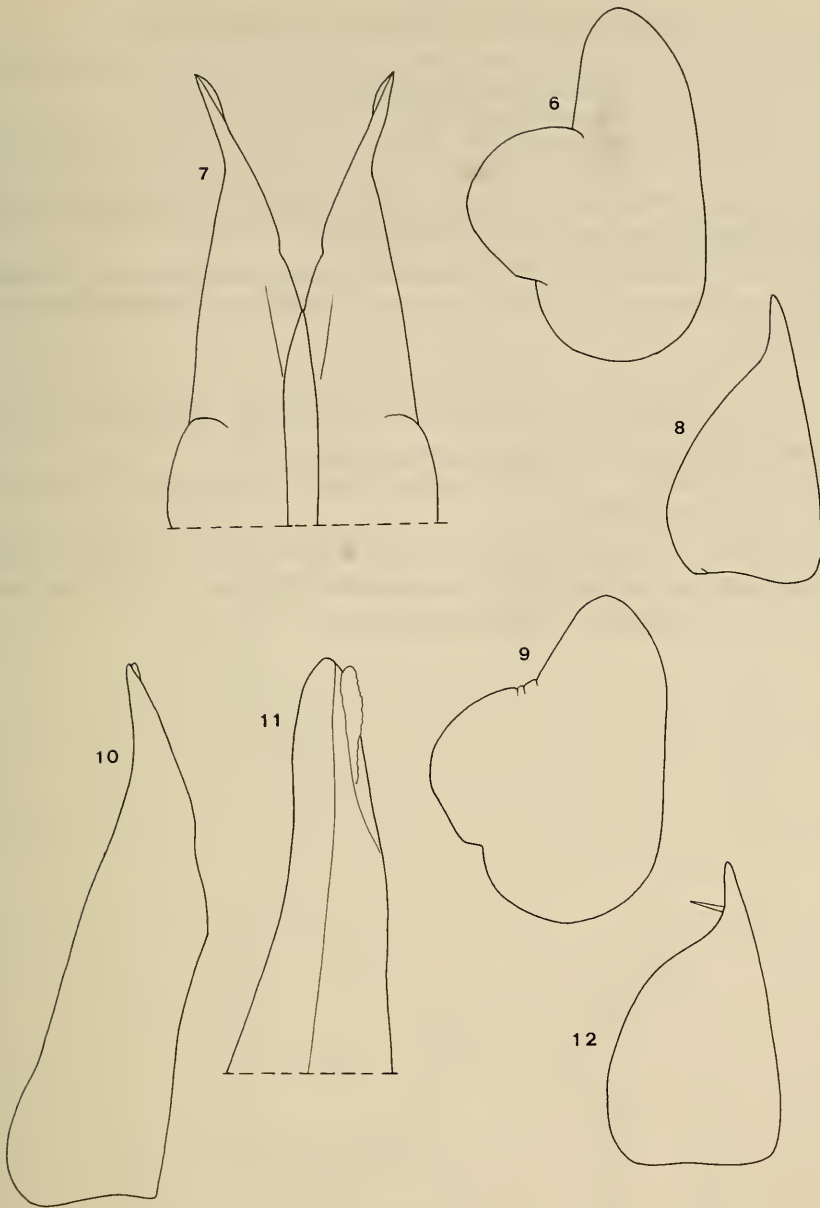
### 2.4. *Chaetophiloscia elongata cypriotes* Vandel, 1965

*Chaetophiloscia elongata cypriotes*: VANDEL 1965: 820, fig. 1;

STROUHAL 1968: 309.

Distribution: Cyprus.

Remarks: According to VANDEL (1965) this subspecies differs in the shape of the apex of pleopod-endopodite I ♂ from *elongata* proper.



Figs. 6–8. *Chaetophiloscia elongata abaronii*; ♂, syntype, original slide preparation of VERHOEFF. – 6. Pleopod-exopod I, – 7. Pleopod-endopod I, – 8. Pleopod-exopod V.

Figs. 9–12. *Chaetophiloscia „syriaca“*; ♂, syntype, original slide preparation of VERHOEFF. – 9. Pleopod-exopod I, – 10. Pleopod-endopod I, – 11. Apex of pleopod-endopod I, – 12. Pleopod-exopod V.

2.5. *Chaetophiloscia hastata* Verhoeff, 1928

*Chaetophiloscia hastata*: VERHOEFF 1933: 108;  
FRANKENBERGER 1939: 30;  
VANDEL 1965: 821;  
STROUHAL 1968: 311;  
SCHMALFUSS 1990, figs. 30–34, 44–45.

Distribution: Known from Italy to the Caspian Sea. Asiatic records from Turkey, Cyprus, Iraq and the Caucasus Region.

Remarks: For Asiatic localities, distribution map, and figures of the diagnostic characters see SCHMALFUSS (1990). STROUHAL (1968) gives a complete bibliography of the species.

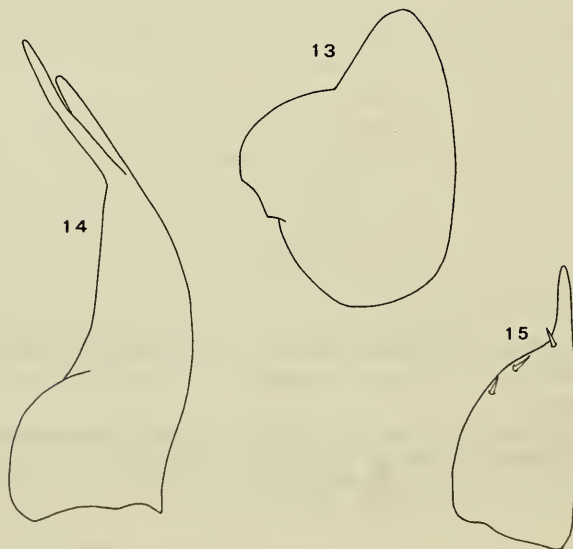
2.6. *Chaetophiloscia kinzelbachi* Schmalfuss, 1986 (Figs. 13–15)

*Chaetophiloscia kinzelbachi*: SCHMALFUSS 1986: 6, figs. 5–14.

Specimens examined: 1 ♂, 1 ♀, southern Turkey, Antakya district, Yayladagi, leg. LIEBEGOTT 8. IV. 1987 (SMF).

Distribution: Recorded only from the type locality NE Latakia in Western Syria and from the Turkish locality mentioned above close to the Syrian border.

Remarks: For diagnostic characters see Figs. 13–15.



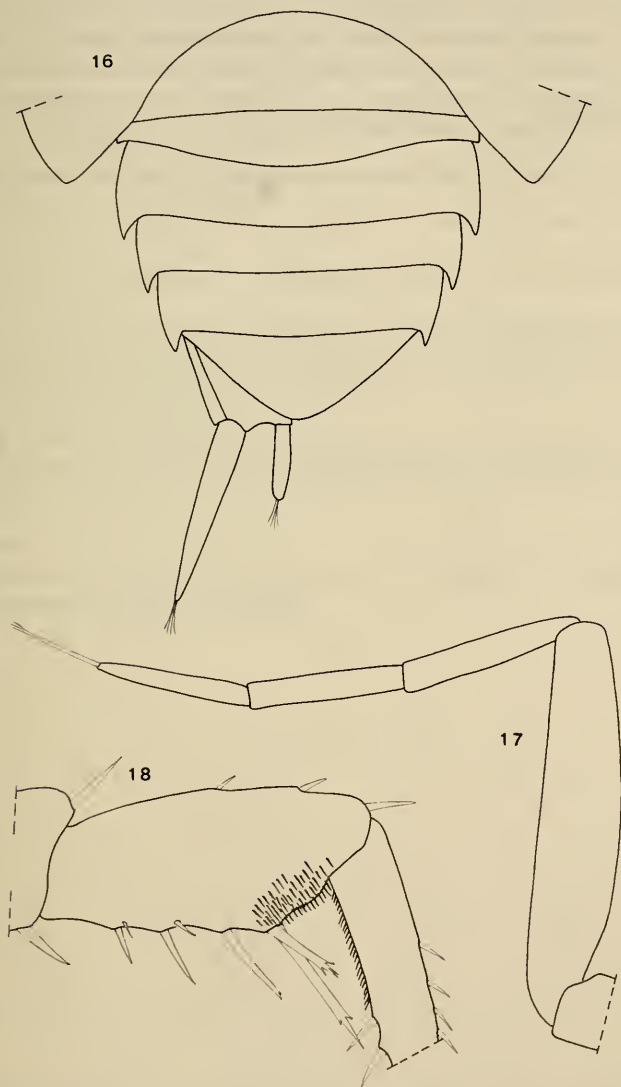
Figs. 13–15. *Chaetophiloscia kinzelbachi*; ♂, holotype, after SCHMALFUSS 1986. — 13. Pleopod-exopod I, — 14. Pleopod-endopod I, — 15. Pleopod-exopod V.

2.7. *Chaetophiloscia lagoi* (Arcangeli, 1934)

*Chaetophiloscia lagoi*: STROUHAL 1968: 311, figs. 1–17;  
SCHMALFUSS 1990, figs. 38–40, 46.

Distribution: Known from the Greek island of Rodhos (Rhodes), from Cyprus and from Israel.

Remarks: For Asiatic localities, distribution map and diagnostic characters see SCHMALFUSS (1990). STROUHAL (1968) gives an excellent set of drawings of this species.



Figs. 16–18. *Chaetophiloscia warburgi* n. sp.; ♂, holotype. — 16. Dorsal view of pleon with left uropod in situ, — 17. Distal part of antenna, — 18. Carpus of pereopod I.

2.8. *Chaetophiloscia warburgi* n. sp. (Figs. 16–21)

Holotype: ♂, 4.5 mm long, Israel, SE Haifa, Allonim, oak stand, 200 m, leg. SCHAWALLER & SCHMALFUSS 7. II. 1987 (SMNS T242).

Paratypes: ♂♂, collecting data as holotype (SMNS T243); – 4 ♂♂, 5 ♀♀, Israel, Lower Galil, 15 km NW Nazareth, Ha Solelim, 200 m, leg. SCHAWALLER & SCHMALFUSS 7. II. 1987 (SMNS T241); – 2 ♂♂, 2 ♀♀, Israel, Haifa, above Technion, 100 m, leg. SCHAWALLER & SCHMALFUSS 8.–10. II. 1987 (SMNS T244).

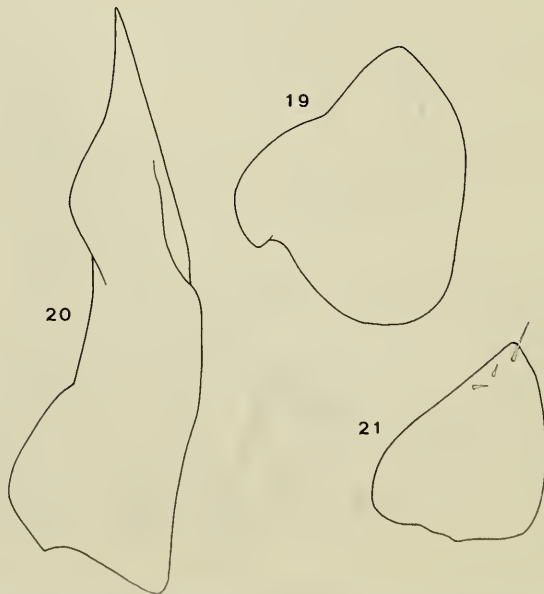
## Description:

Dimensions. Maximal length in ♂ 4.5 mm, in ♀ 6.2 mm.

Coloration. Tergal parts brown with light muscle spots, color-pattern as in *Ch. cellaria*.

Diagnostic characters. Pleopod-exopodite I ♂ with short, obliquely truncated distal lobe, no angle externally between distal lobe and proximal part (Fig. 19). Pleopod-endopodite I ♂ with straight narrow apex (Fig. 20). Pleopod-exopod V ♂ see Fig. 21, antenna and carpus I ♂ see Figs. 17–18. Only ♂♂ can be safely identified and separated from other species with similar coloration, e.g. *cellaria*.

Derivatio nominis: The new species is dedicated to Prof. Dr. MICHAEL WARBURG, Haifa.



Figs. 19–21. *Chaetophiloscia warburgi* n. sp.; ♂, holotype. – 19. Pleopod-exopod I, – 20. Pleopod-endopod I, – 21. Pleopod-exopod V.



### 3. Acknowledgments

I wish to thank Dr. L. TIEFENBACHER (Zoologische Staatssammlung München) and Dr. M. TÜRKAY (Senckenberg-Museum Frankfurt) for the loan of *Chaetophiloscia*-material, Dr. W. SCHAWALLER (Staatliches Museum für Naturkunde Stuttgart) for his isopod collections from Israel, and Prof. M. WARBURG (Haifa) for help and guidance in Israel. The author's journey to Israel was financially supported by the Israel Institute of Technology, Haifa.

### 4. Literature

- FRANKENBERGER, Z. (1939): Sur quelques isopodes de la Mésopotamie. — Sb. ent. Odd. nar. Mus. Praz 17: 23–31; Prague.
- SCHMALFUSS, H. (1986): Die Land-Isopoden (Oniscidea) Syriens und des Libanon. Teil I. — Stuttgarter Beitr. Naturk. (Serie A), Nr. 391: 21 pp.; Stuttgart.
- (1990): Die Landisopoden (Oniscidea) Griechenlands. 11. Beitrag: Gattung *Chaetophiloscia* (Philosciidae). — Revue suisse Zool. 97: 169–193; Geneva.
- STROUHAL, H. (1968): Die Landisopoden der Insel Zypern. — Annln naturhist. Mus. Wien 79: 299–387; Vienna.
- STROUHAL, H. & PRETZMANN, G. (1975): Israelische Isopoden. — Annln naturhist. Mus. Wien 79: 623–663; Vienna.
- VANDEL, A. (1955): Mission HENRI COIFFAIT au Liban (1951). 8. Isopodes terrestres. — Archs Zool. exp. gén. 91: 455–531; Paris.
- (1965): La faune isopodique de l'île de Chypre. — Bull. Mus. natn. Hist. nat. (2e série) 36: 818–830; Paris.
- VERHOEFF, K. (1923): Zur Kenntnis der Landasseln Palästinas. — Arch. Naturgesch. (Abt. A) 89: 206–231; Berlin.
- (1933): Zur Systematik, Geographie und Ökologie der Isopoda terrestria Italiens und über einige Balkan-Isopoden. — Zool. Jahrb. (Abt. Syst.) 65: 1–64; Jena.
- (1949): Über Land-Isopoden aus der Türkei, III. — Istanbul Üniv. fen. Fak. Mecm. (Serie B) 14: 21–48; Istanbul.
- VERHOEFF, K. & STROUHAL, H. (1967): Isopoda terrestria der Türkei, 4. Aufsatz, und über Anpassungen an die Volvation bei den Kuglerfamilien Armadillidiidae, Eubelidae und Armadillidae. — Zool. Jahrb. (Abt. Syst.) 93: 465–506; Jena.

Author's address:

Dr. HELMUT SCHMALFUSS, Staatliches Museum für Naturkunde Stuttgart (Museum am Löwentor), Rosenstein 1, D-7000 Stuttgart 1.

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Stuttgarter Beiträge Naturkunde Serie A \[Biologie\]](#)

Jahr/Year: 1991

Band/Volume: [463\\_A](#)

Autor(en)/Author(s): Schmalfluss Helmut

Artikel/Article: [The Terrestrial Isopod Genus Chaetophiloscia in Western Asia \(Oniscidea: Philosciidae\) 1-9](#)