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**Materials to the geographical distribution of  
*Brachychthoniidae* (Acari: Oribatei)**

The most species of the family *Brachychthoniidae* have very large distribution, usually cosmopolitan or subcosmopolitan. Their relatively better knowledge is confined to Europe only. Little information is available as to occurrence of members of the family in the rest of the world. Almost no data refer to South Asia, Australia, Africa; relatively meagre are reports concerning both Americas and Asia. *Brachychthoniidae*, due to their small dimensions, probably spread easily with winds on in other way and their large areas of occurrence are not conditioned historically. It is also worth of mentioning that despite their wide distribution almost all the species do not reveal the morphological variability. The listed below new finds of 21 species on stands from various parts of the world, mainly from Asia, permit to widen our knowledge of their ranges.

**The list of stands**

**Mexico**

1. Chiapas, the lake Montebello to the border with Guatemala (about 2000 m a.s.l.), 8.III.1969, leg. K. KOWALSKI.

**Spitsbergen**

2. Eastern part of Recherchefjord, *Salix*, *Saxifraga*, VIII. 1965, from sieved litter, leg. J. W. MICHEJDA.

**Austria**

3. 20 km north from Wien, Klanenburg castle, under low deciduous trees, 28.XII.1974, leg. L. OBSHARSKY.

**Italy**

4. 10 km north from the center of Napoli, in the crater 400 years old, on slopes of western exposition 35–40°step, abundant vegetation shrubby oaks, beeches, ash-trees, pines, forsythias, 22.IV.1971, from litter, leg. J. W. MICHEJDA.

5. Western part of Sicily, Erice near Trapani, funnel-like valley, south-eastern exposition, mixed forest, ash-trees, sparse pines, dense raspberry and ivy bush in the brushwood, 16.IV.1971, from litter, leg. J. W. MICHEJDA.

Bulgaria

6. Vračanska Planina, Ledenika, old beech forest south from the tourist house, on the rocky, calcareous slope, altitude 1100–1500 m a. s. l., 15.IX.1961, from litter, leg. J. URBAŃSKI.

Yugoslavia

7. Croatia, Plitvička jezera, at foot of south-eastern slopes by the lakes Okrugljak and Male, mixed forest, 15.XI.1963, from leaves, leg. J. RAFALSKI.

Greece

8. Crete, The National Park in the Samarii Valley, a clump of *Acer sempervirens* (inaccessible to goats) on a slope above Omalos, 1160 m a. s. l., 27.IX.1975, leg. T. WOJTERSKI.

USSR, Lithuanian SSR

9. Elektronai near Vilnius, an island in the lake Elektronai, old pine forest with rich undergrowth, 22.IX.1972, from damp mosses, leg. K. KNAPIK.

Iran

10. Rundbarek, beeches growing on banks of a stream, 31.VII.1969, from litter, leg. J. W. MICHEJDA.

USSR, Tadjikistan

11. Hodža-Obigarm, Malyj Igizak, plateau 1800–2000 m a. s. l., sandstones on the valley floor by a stream, 20.V.1972, from mosses, leg. J. PAWŁOWSKI.

12. Above the village Sarina, Chrebet Petra 1-ego (2750 m a. s. l.), 20.V.1972, from mosses on stones in a firn field, leg. J. PAWŁOWSKI.

USSR, District of Irkutsk

13. Listvjanka on Baikal, woodless slope with some singular trees, sieved material collected in the bushes of fern (*Pteridium aquilinum*), 27.VI.1974, leg. J. PAWŁOWSKI.

14. Peščanaja Buchta of the Baikal, dry mosses from shaded rocks on the lake, 28.VI.1974, leg. A. SZEPTYCKI.

15. Locality as mentioned in 14, mixed forest of *Pinus sibirica* and birches, 28.VI.1974, from leaves and litter of conifer needles, leg. A. SZEPTYCKI.

16. Bolšyje Koty on Baikal, alder thicket growing on a gravelly soil, 29.VI.1974, from moistened alder leaves, leg. A. SZEPTYCKI.

17. Listvjanka on Baikal, alder thicket nearby a little creek, 30.VI.1974, from moistened mosses growing among rushes, leg. A. SZEPTYCKI.

18. Locality as mentioned in 17, slope of a valley, alder-birch-rowan forest, 30.VI.1974, from sieved debris sampled among ferns, leg. A. SZEPTYCKI.

Korean People's Democratic Republic, Prov. Hamjong-pukto

19. A shore of Susōng-čhōn River near Čhōngdžin, sieved material collected below willow trees, 22.V.1974, leg. J. PAWŁOWSKI.

20. Pujun, sandy dune on a gravelly alluvia of the river, thin layer of dry mosses among weak little pines, 22.V.1974, leg. A. SZEPTYCKI.

21. A slope of Krauma-bong, 1300 m a. s. l., gorge of Džyur-čhōn stream, 23.V.1974, from mosses overgrowing stones in the stream, leg. A. SZEPTYCKI.

22. Locality as mentioned in 21, 23.V.1974, from walls and rot on the gorge slope, leg. A. SZEPTYCKI.

23. Onpho-ri, Kjongsong district, 24.V.1974, from conifer needles collected below pines growing on an arid ridge, leg. A. SZEPTYCKI.

24. Locality as mentioned in 23, a humid ravine with deciduous forest, 24.V.1974, from litter collected at foot of rocks, leg. A. SZEPTYCKI.



Korean People's Democratic Republic, Prov. Kesŏng-si

25. Above the waterfall Pakjŏn (Chŏnma-san Mts.), mosses from shaded and dry rocks in a forest, 7.VI.1974, leg. A. SZEPTYCKI.

26. Lokality as mentioned in 25, litter from the deciduous forest with some admixture of pines, 7.VI.1974, leg. A. SZEPTYCKI.

Korean People's Democratic Republic, Kangvŏn-do, Kymgang-san (Diamond Mts.)

27. South-exposed slope of Manmur-sang (about 1100 m a.s.l.), detritus and tufts of grass from rock cracks, 18.VI.1974, leg. A. SZEPTYCKI.

28. Lokality as mentioned in 27, (550 m a.s.l.), litter from deciduous forest nearby a creek, 18.VI.1974, leg. A. SZEPTYCKI.

29. Kurjŏng-pho, waterfall area, litter from an inconspicuous group of bushes growing in a small crack in granite rock, 17.VII.1974, leg. A. SZEPTYCKI.

Korean People's Democratic Republic

30. Prov. Janggang-do, south-eastern foot of the Pektu-san mountain (1800 m a.s.l.), fir forest with an admixture of larches, 5.IX.1971, from damp mosses, leg. A. SZEPTYCKI.

31. Prov. Phjŏngjang-si, Jongak-san, lower part of the south slope, damp litter (acacia leaves mainly) in a dry valley of a stream, 29.V.1974, leg. A. SZEPTYCKI.

Acknowledgements: The author is indebted to all collectors for the valuable and interesting materials of *Brachychthoniidae*.

#### *Eobrachychthonius oudemansi* HAMMEN

Yugoslavia: 7. — 1 spec.; USSR: 9. — 1 spec.; Korean People's Democratic Republic: 19. — 1 spec., 29. — 10 spec.

*E. oudemansi* is a Holarctic species, also reported from South America. Not known as yet in Yugoslavia though revealed in southern Europe (Italy, Bulgaria). A few stands in Asia (USSR and Japan) are enriched by the first Korean record.

#### *Pocilochthonius italicus* (BERLESE)

Austria: 3. — 33 spec.; Italy: 4. — 40 spec., 5. — 56 spec.; Yugoslavia: 7. — 2 spec.

This species was already known from mentioned countries.

#### *Brachychochthonius immaculatus* FORSSLUND

Italy: 4. — 1 spec., 5. — 5 spec.; Bulgaria: 6. — 4 spec.; Greece: 8. — 1 spec.

*B. immaculatus* is a Holarctic species. *Brachychochthonius semiornatus* reported by MARCUZZI, LORENZONI and CASTRI (1972) is probably identical with the above species.

#### *Brachychochthonius rostratus* (JACOT)

Italy: 4. — 5 spec.; Bulgaria: 6. — 3 spec.; Yugoslavia: 7. — 1 spec.; USSR: 11. — 1 spec.; 13. — 1 spec.

A Holarctic species, not reported from Yugoslavia as yet, though revealed in southern Europe (Italy, Bulgaria). BULANOVA-ZACHVATKINA (1970) regards

it is an Euro-Siberian species. Another stand from Siberia lies in the surroundings of the Baikal. Recently (CHINONE and AOKI 1972) it was reported from Japan and hence our knowledge of its Asiatic distribution area has been considerably widened.

*Brachychochthonius jugatus* f. *suecica* FORSSLUND

Italy: 4. — 1 spec.

A form widely distributed in the whole Holarctic Region. It was also found in New Zealand. The stand in Italy is the southernmost one in Europe.

*Synchthonius crenulatus* (JACOT)

Italy: 4. — 1 spec.; Bulgaria: 6. — 2 spec.; Korean People's Democratic Republic: 24. — 1 spec.

*S. crenulatus* is a Holarctic species, in Europe it has not been discovered in Scandinavia. In Asia its easternmost known stand lied in the Altai Mts. The Korean stand markedly shifts its eastern border of occurrence.

*Synchthonius elegans* FORSSLUND

Bulgaria: 6. — 1 spec.; Iran: 10. — 1 spec.

A Palearctic species, however not encountered in southern Europe so far. It was revealed at a number of localities in the Asiatic part of USSR as well as in Mongolia and Japan. The stand in Iran is the southernmost record of this species.

*Brachychthonius berlesei* WILLMANN

Italy: 4. — 67 spec.; USSR: 9. — 38 spec.

A widely distributed species, very common in many parts of the globe.

*Brachychthonius marginatus* FORSSLUND

Italy: 4. — 1 spec.; USSR: 9. — 9 spec.; Korean People's Democratic Republic: 23. — 14 spec.

*B. marginatus* seemed to be a boreal species. It was reported from Europe only, mainly from its northern part. A find in Italy is the southernmost as yet. At present its find in Korea permits it to suppose to be an Euro-Mandshurian element.

*Liochthonius alpestris* (FORSSLUND)

Spitsbergen: 2. — 1 spec.

A Palearctic, Euro-Middle-Asiatic species. It is found most frequently in northern and central parts of Europe. The stand from Spitsbergen is the northernmost one.



*Liochthonius clavatus* (FORSSLUND)

USSR: 14. — 26 spec.

*L. clavatus* is an European species, found in northern and eastern part of the continent. At present, owing to its finds in the Baikal region it may be called an Euro-Siberian element.

*Liochthonius ensifer* (STRENZKE)

USSR: 17. — 1 spec.

*L. ensifer* was reported in Europe only and might have been called boreal. The stand from Baikal area enlarges its known range and allows to consider it Palearctic. All few records of this species refer to peat-bogs or related biotopes.

*Liochthonius hystericinus* (FORSSLUND)

USSR: 13. — 5 spec., 16. — 1 spec., 18. — 3 spec.

A Holarctic species known in Asia from a few localities. The stands in Irkutsk vicinity do not change the already established area of its distribution.

*Liochthonius intermedius* CHINONE et AOKI

Korean People's Democratic Republic: 21. — 1 spec., 27. — 2 spec.

*L. intermedius* has been recently described from Japan (CHINONE and AOKI 1972).

*Liochthonius lapponicus* (TRÄGÅRDH)

USSR: 12. — 1 spec.; Korean People's Democratic Republic: 20. — 1 spec., 21. — 1 spec., 23. — 4 spec., 25. — 1 spec., 27. — 1 spec.

*L. lapponicus* was considered a West-Holarctic element, its all new stands from Asia however widen its known range and hence it can be recognized as a Holarctic species.

*Liochthonius muscorum* FORSSLUND

USSR: 9. — 6 spec. 15. — 4 spec., 14. — 1 spec.

*L. muscorum* was known from North Europe only and thus it could be considered a boreal species. However, the stands from Irkutsk vicinity makes possible to define this species as Euro-Siberian.

*Liochthonius perpusillus* (BERLESE)

Mexico: 1. — 2 spec.; Italy: 4. — 23 spec.; USSR: 9. — 11 spec., 11. — 1 spec.; Korean People's Democratic Republic: 30. — 1 spec.

*L. perpusillus* is a Holarctic species but the stand in Mexico marks its southern border in North America, while that in Korea lies on its eastern border.

*Liochthonius plumosus* MAHUNKA

Korean People's Democratic Republic: 26. — 1 spec.

*L. plumosus* was known from Hungary and Poland till recently. New finds of this species in Japan (CHINONE and AOKI 1972) and in Korea (present paper) permits to qualify it as a Palearctic species of Euro-Mandshurian range.

*Liochthonius plumosus* has been described by MAHUNKA from Hungary in 1969. The name *Liochthonius plumosus* CHINONE et AOKI, 1972 is a synonym and younger homonym simultaneously.

*Liochthonius propinquus* NIEDBALA

USSR: 13. — 1 spec., 15. — 2 spec., 16. — 4 spec., 18. — 2 spec.

A species recently described from Poland. Presently, it was encountered on the Baikal Lake. It is believed however to be frequently mistaken for other related species, especially for *L. perpusillus*. It is fairly common, occurs in many various habitats. The new records allow to consider this species a Euro-Siberian one.

*Liochthonius sellnicki* (THOR)

Italy: 4. — 28 spec.; Bulgaria: 6. — 3 spec.; Iran: 10. — 1 spec.; USSR: 13. — 15 spec., 15. — 6 spec., 18. — 7 spec.; Korean People's Democratic Republic: 20. — 1 spec., 21. — 1 spec., 27. — 1 spec., 28. — 1 spec.

A Holarctic species already known from several localities in the Asiatic part of the USSR and in Japan. Its new stands from the Baikal region and the Korean Peninsula are congruent with the already known range of this species distribution, whereas the Iranian record is the southernmost one.

*Liochthonius strenzkei* FORSSLUND

Greece: 8. — 11 spec.; Korean People's Democratic Republic: 20. — 2 spec., 30. — 1 spec., 31. — 5 spec.

*L. strenzkei* is a Holarctic species presumably frequently mistaken for *L. sellnicki*. The stands from the Korean Peninsula are the easternmost for this species.

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## STRESZCZENIE

[Tytuł: Materiały do poznania rozmieszczenia *Brachychthoniidae* (*Acari*: *Oribatei*)]

Autor przedstawia wykaz 21 gatunków *Brachychthoniidae* z 31 stanowisk w Meksyku, Europie i Azji wraz z uwagami o ich rozmieszczeniu geograficznym.

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## РЕЗЮМЕ

[Заглавие: Материалы к познанию распространения *Brachychthoniidae* (*Acari*: *Oribatei*)]

Автор сообщает о 21 виде *Brachychthoniidae* из 31 местонахождения в Мексике, Европе и Азии и приводит замечания о их географическом распространении.

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Redaktor pracy — dr W. Starega

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Państwowe Wydawnictwo Naukowe — Warszawa 1977  
Nakład 780+90 egz. Ark. wyd. 0,5; druk. 0,5. Papier druk. sat. kl. III, 80 g B1. Cena zł 10,—  
Nr zam. 1100/77 — Wrocławska Drukarnia Naukowa