

# BEAUFORTIA

SERIES OF MISCELLANEOUS PUBLICATIONS

ZOOLOGICAL MUSEUM - AMSTERDAM

No. 58

Volume 5

May 20, 1957

## Zoological Results of a Collecting Journey to Yugoslavia, 1954

1

Introduction and List of Collecting Stations \*)

by

C. A. W. JEEKEL and J. H. STOCK

(Zoological Museum, Amsterdam)

In the spring of 1954, from April 28 to June 14, six members of the scientific staff of the Zoological Museum of Amsterdam made a collecting trip to Yugoslavia. The primary purpose of this journey was collecting for the Museum, animals from that part of Europe being only poorly represented. At the same time, it was the intention to collect large series at as many localities as possible for the study of geographical variation. Collecting activities were restricted to certain animal groups, according to the personal interest and collecting experience of the participants. Therefore, the collections chiefly consist of invertebrates: (Macro) Lepidoptera, Arachnoidea, Isopoda, Mollusca, and aquatic microfauna (Copepoda, Amphipoda, Nematoda, Hydrachnidae, Halacaridae).

The results of the expedition will be published under the collective title "*Zoological results of a collecting journey to Yugoslavia, 1954*", and will appear successively in *Beaufortia*.

### DATA AND ACKNOWLEDGEMENTS

The names of the participants and their special tasks were, in alphabetical sequence: A. VAN BRAKEL (draughtsman), Miss F. GEHRELS, presently Mrs. D. HILLENIUS (botany, Amphibia, Reptilia), C. A. W. JEEKEL (Insecta, Myriapoda, Arachnoidea, Mollusca), A. P. VAN OVERBEEK (general), J. H. STOCK (aquatic microfauna, Mollusca, Insecta), Miss G. VERBERNE (Lepidoptera), J. J. VINK (technician), P. DE WOLF (Pisces).

During the journey, a Renault fourgeon 1000 kg was used, equipped with a complete camping, collecting, and dredging outfit. The journey was made possible by a grant from the "UYTTENBOOGAART Foundation", and additional contributions of private persons. We are fortunate enough to acknowledge great help from various Yugoslavian scientists: Prof. TONKO ŠOLJAN (Split), Prof. JANEZ HOENIGMAN (Split), Prof. ANTE

\*) Received November 1955.

VULETIĆ (Split) Mr. FRANJO NICOLIĆ (Dubrovnik), Prof. STANKO KARAMAN (Skopje). To all these colleagues, and to many others, not mentioned here by name, we take great pleasure in rendering the most sincere thanks of all participants.

#### LIST OF STATIONS

In the orthography of the geographical names, we consistently followed the maps of Central Europa and of Yugoslavia, edited by KÜMMERLY and FREY, Bern, 1953. Where needed, synonyms occurring in "Andrees Handatlas" have been added in parentheses. The data on longitude, latitude, and altitude are rather accurate estimates only.

- Stat. 1 GERMANY, Baden: along the Autobahn between Heidelberg and Karlsruhe; deciduous forest; April 29, 1954.
- Stat. 2 GERMANY, Württemberg: Mühlhausen ( $09^{\circ} 35'$  E.,  $48^{\circ} 35'$  N.) near Ulm; near the Autobahn-tunnel; barren mountain slope, from under stones; April 29, 1954.
- Stat. 3 GERMANY, Oberbayern: southern shore of the Chiemsee, 4 km east of Felden ( $12^{\circ} 23'$  E.,  $47^{\circ} 50'$  N.); terrestrial animals; willow-shrubbery on marshy ground, chiefly from decaying trunks; aquatic animals: shore exploration, sandy bottom; April 30, 1954.
- Stat. 4 AUSTRIA, Ober-Osterreich: along the western ascent of the Pötschen-pass, between Hallstatt and Aussee ( $13^{\circ} 45'$  E.,  $47^{\circ} 35'$  N.); estimated altitude 700—900 m a.s.l.; forest of *Picea* and *Fagus*, chiefly from under bark of dead trunks; May 1, 1954.
- Stat. 5 YUGOSLAVIA, Slovenia: Sp. Ložnica near Slov. Bistrica (= Wind. Feistritz) ( $15^{\circ} 35'$  E.,  $46^{\circ} 25'$  N.); forest of *Picea* and *Betula*, on moist clayish ground; May 2, 1954.
- Stat. 6 YUGOSLAVIA, Slovenia: 5 km north-west of Ilirska Bistrica (= Feistritz) ( $14^{\circ} 15'$  E.,  $45^{\circ} 35'$  N.); along a brook in limestone mountains, deciduous forest (*Salix*, *Alnus*, *Quercus*), chiefly from under stones; May 2, 1954.
- Stat. 7 YUGOSLAVIA, Slovenia: 5 km north-west of Ilirska Bistrica (= Feistritz) ( $14^{\circ} 15'$  E.,  $45^{\circ} 35'$  N.); aquatic animals from brook; May 2, 1954.
- Stat. 8 YUGOSLAVIA, Croatia: Šušak, 3 km east of Rijeka (= Fiume) ( $14^{\circ} 30'$  E.,  $45^{\circ} 20'$  N.); neglected olive-yards and bare coastal terrace, chiefly from under stones; part of the insects collected on light; May 2—3, 1954.
- Stat. 9 YUGOSLAVIA, Croatia: Šušak, 3 km east of Rijeka (= Fiume) ( $14^{\circ} 30'$  E.,  $45^{\circ} 20'$  N.); marine animals; sea shore consisting of coarse gravel; May 2—3, 1954.
- Stat. 10 YUGOSLAVIA, Croatia: Senj (= Zengg; = Segna) ( $14^{\circ} 53'$  E.,  $44^{\circ} 59'$  N.); marine animals from wharf-side; waterline; May 3, 1954.
- Stat. 11 YUGOSLAVIA, Croatia: between Senj and Melnice (= Vratnik) ( $14^{\circ} 58'$  E.,  $44^{\circ} 58'$  N.); estimated altitude 500—600 m a.s.l.; forest of *Pinus*, chiefly from under stones; May 3, 1954.

- Stat. 12 YUGOSLAVIA, Croatia: near Hotel at Lake Kozjak (one of the Plitvička Jezera) ( $15^{\circ} 36'$  E.,  $44^{\circ} 42'$  N.); forest of *Fagus*, chiefly from under stones and decaying leaves; May 3—4, 1954.
- Stat. 13 YUGOSLAVIA, Croatia: near Hotel at Lake Kozjak (one of the Plitvička Jezera) ( $15^{\circ} 36'$  E.,  $44^{\circ} 42'$  N.); aquatic animals; shore exploration; sandy bottom with stones and detritus; May 3—4, 1954.
- Stat. 14 YUGOSLAVIA, Croatia: near Hotel at Lake Kozjak (one of the Plitvička Jezera) ( $15^{\circ} 36'$  E.,  $44^{\circ} 42'$  N.); torpedo net employed from the shore; quiet bay, abounding with humus; depth 0—1 m; May 4, 1954.
- Stat. 15 YUGOSLAVIA, Croatia: near Hotel at Lake Kozjak (one of the Plitvička Jezera) ( $15^{\circ} 36'$  E.,  $44^{\circ} 42'$  N.); torpedo net, employed from a row-boat; quiet bay; depth 2—7 m; May 4, 1954.
- Stat. 16 YUGOSLAVIA, Croatia: near Hotel at Lake Kozjak (one of the Plitvička Jezera) ( $15^{\circ} 36'$  E.,  $44^{\circ} 42'$  N.); torpedo net employed from a row-boat; depth 7—14 m; bottom: lime grit; May 4, 1954.
- Stat. 16 YUGOSLAVIA, Croatia: near Hotel at Lake Kozjak (one of the Plitvička Jezera) ( $15^{\circ} 36'$  E.,  $44^{\circ} 42'$  N.); small trawl and grab; depth 2—14 m; bottom calcareous sand and stones; May 4, 1954.
- Stat. 18 YUGOSLAVIA, Croatia: near Hotel at Lake Kozjak (one of the Plitvička Jezera) ( $15^{\circ} 36'$  E.,  $44^{\circ} 42'$  N.); grab; depth 33 m; bottom: calcareous ooze; May 4, 1954.
- Stat. 19 YUGOSLAVIA, Dalmatia: at Lake Prokljan off Skradin (= Scardone) ( $15^{\circ} 53'$  E.,  $43^{\circ} 48'$  N.); olive-yards, chiefly from under stones; May 6, 1954.
- Stat. 20 YUGOSLAVIA, Dalmatia: Lake Prokljan off Skradin (= Scardone) ( $15^{\circ} 53'$  E.,  $43^{\circ} 48'$  N.); shore exploration; water as a result of rainfall nearly fresh, otherwise salt; May 6, 1954.
- Stat. 21 YUGOSLAVIA, Dalmatia: between Boić and Trogir (= Trau) ( $16^{\circ} 15'$  E.,  $43^{\circ} 30'$  N.); estimated altitude 200 m a.s.l.; barren limestone plateau; May 6, 1954.
- Stat. 22 YUGOSLAVIA, Dalmatia: Split (= Spalato), surroundings of the Oceanographic Institution ( $16^{\circ} 23'$  E.,  $43^{\circ} 30'$  N.); fauna of forest of *Pinus*; May 7—11, 1954.
- Stat. 23 YUGOSLAVIA, Dalmatia: Splitski Kanal (= Canale di Spalato); on board motor-vessel „Bios“; trawl; 1st haul; depth 50—60 m; muddy bottom; May 7, 1954.
- Stat. 24 YUGOSLAVIA, Dalmatia: as Stat. 23; 2nd haul.
- Stat. 25 YUGOSLAVIA, Dalmatia: Kastelanski Zaljev (= Kastela Bucht), north-west of Split (= Spalato) ( $16^{\circ} 24'$  E.,  $43^{\circ} 31'$  N.); small trawl employed from row-boat; depth 3—4 m; bottom: sand; May 8, 1954.
- Stat. 26 YUGOSLAVIA, Dalmatia: Split (= Spalato), surroundings of the Oceanographic Institution ( $16^{\circ} 23'$  E.,  $43^{\circ} 30'$  N.); marine animals; shore exploration; May 9, 1954.
- Stat. 27 YUGOSLAVIA, Dalmatia: Split (= Spalato), harbour of the Oceanographic Institution ( $16^{\circ} 23'$  E.,  $43^{\circ} 30'$  N.); torpedo

- net, employed from the wharf-side; bottom: stones and weeds; depth 0—3 m; May 9, 1954.
- Stat. 28 YUGOSLAVIA, Dalmatia: Split (= Spalato), harbour of the Oceanographic Institution ( $16^{\circ} 23' E.$ ,  $43^{\circ} 30' N.$ ); on wharf-side and on seaweeds (*Cystoseira*, *Enteromorpha*) from the bottom; depth 0—1 m; May 9, 1954.
- Stat. 29 YUGOSLAVIA, Dalmatia: Kastelanski Zaljev (= Kastela Bucht), north-west of Split (= Spalato) ( $16^{\circ} 24' E.$ ,  $43^{\circ} 31' N.$ ); on light; May 9, 1954.
- Stat. 30 YUGOSLAVIA, Dalmatia: Split (= Spalato), surroundings of the Oceanographic Institution ( $16^{\circ} 23' E.$ ,  $43^{\circ} 30' N.$ ); fauna of olive-yards and hay-fields: May 7—11, 1954.
- Stat. 31 YUGOSLAVIA, Dalmatia: Solin (= Salona) ( $16^{\circ} 29' E.$ ,  $43^{\circ} 32' N.$ ); from under stones: May 9, 1954.
- Stat. 32 YUGOSLAVIA, Dalmatia: Split (= Spalato), south-east of the Oceanographic Institution, 500 m offshore; small trawl; depth 2—10 m; bottom: sand, stones, *Posidonia*; May 11, 1954.
- Stat. 33 YUGOSLAVIA, Dalmatia: Malapetsj near Sutina, in the Mosor Planina, south of Sinj; small cave, about 50 m long; stalactites, collapsed doline; May 12, 1954.
- Stat. 34 YUGOSLAVIA, Dalmatia: Subanova Jama, about 4 km from Sutina in the Mosor Planina, south of Sinj; larger cave, 160 (?) m; many nests of the stock-dove; May 12, 1954.
- Stat. 35 YUGOSLAVIA, Dalmatia: Sutina, in the Mosor Planina, south of Sinj; limestone hills; May 12, 1954.
- Stat. 36 YUGOSLAVIA, Dalmatia; 7 km east of Split (= Spalato); on the road; May 14, 1954.
- Stat. 37 YUGOSLAVIA, Dalmatia: 5 km south-east of Drvenik ( $17^{\circ} 15' E.$ ,  $43^{\circ} 09' N.$ ); olive-yards; May 14, 1954.
- Stat. 38 YUGOSLAVIA, Dalmatia: delta of the Neretva (= Narenta)-river near Metković ( $17^{\circ} 39' E.$ ,  $43^{\circ} 03' N.$ ); bogland and barred limestone slopes; aquatic animals from a small well; May 14, 1954.
- Stat. 39 YUGOSLAVIA, Dalmatia: Lapad ( $18^{\circ} 04' E.$ ,  $42^{\circ} 38' N.$ ); olive-yards and small meadows; chiefly from under stones; May 15—17, 1954.
- Stat. 40 YUGOSLAVIA, Dalmatia: the eastern end of the Ombla-valley ( $18^{\circ} 07' E.$ ,  $42^{\circ} 40' N.$ ); limestone slope with *Quercus* and *Pinus*; May 16—17, 1954.
- Stat. 41 YUGOSLAVIA, Dalmatia: Vilina Pečina, cave at the eastern end of the Ombla-valley; depth 60 (?) m; May 16, 1954.
- Stat. 42 YUGOSLAVIA, Dalmatia: Cavtat (= Ragusa Vecchia) ( $18^{\circ} 12' E.$ ,  $42^{\circ} 35' N.$ ); cultivated ground; May 16, 1954.
- Stat. 43 YUGOSLAVIA, Dalmatia: Cavtat (= Ragusa Vecchia) ( $18^{\circ} 12' E.$ ,  $42^{\circ} 35' N.$ ); Sipun-spilja (= Aesculapius-cave); May 16, 1954.
- Stat. 44 YUGOSLAVIA, Dalmatia: Cavtat (= Ragusa Vecchia) ( $18^{\circ} 12' E.$ ,  $42^{\circ} 35' N.$ ); Sipun-spilja (= Aesculapius-cave); small subterranean fresh water lake; plankton net; May, 16, 1954.
- Stat. 45 YUGOSLAVIA, Dalmatia: Izvora Ombla (= sources of the Ombla-River) ( $18^{\circ} 07' E.$ ,  $42^{\circ} 40' N.$ ); from stones on the bank, and washings of algae and mosses; May 16, 1954.

- Stat. 46 YUGOSLAVIA, Dalmatia: Koločepski Kanal (= Šipanjski Kanal, = Canale di Calamotta), north of Otok Lopud (= Mezzo Id.) ( $17^{\circ} 57'$  E.,  $42^{\circ} 43'$  N.); on board motor-vessel „Istrcivač“; trawl; depth 30—40 m; bottom: sand, shells; May 17, 1954.
- Stat. 47 YUGOSLAVIA, Dalmatia: 5 km west of Hercegnovi (= Castelnuovo) ( $18^{\circ} 32'$  E.,  $42^{\circ} 28'$  N.); marshy meadows; May 18, 1954.
- Stat. 48 YUGOSLAVIA, Montenegro: along the road from Kotor (= Cattaro) to Cetinje, above Kotor ( $18^{\circ} 47'$  E.,  $42^{\circ} 24'$  N.); estimated altitude 1000 m a.s.l.; barren mountain slope; May 18, 1954.
- Stat. 49 YUGOSLAVIA, Montenegro: 5 km north-east of Peljev Brijeg ( $19^{\circ} 32'$  E.,  $42^{\circ} 35'$  N.); estimated altitude 1000 m a.s.l.; shrubs of *Fagus*; May 19, 1954.
- Stat. 50 YUGOSLAVIA, Montenegro: Tara-valley near Mateševu ( $19^{\circ} 34'$  E.,  $42^{\circ} 41'$  N.); shrubs of *Fagus*; May 19, 1954.
- Stat. 51 YUGOSLAVIA, Montenegro: valley of the river Lim, near Andrijevica ( $19^{\circ} 48'$  E.,  $42^{\circ} 47'$  N.); deciduous forest (*Corylus*, *Fagus*); May 19—20, 1954.
- Stat. 52 YUGOSLAVIA, Montenegro: valley of the river Lim, near Andrijevica ( $19^{\circ} 48'$  E.,  $42^{\circ} 47'$  N.); aquatic animals from mountain brook; washings of mosses from a waterfall; May 19—20, 1954.
- Stat. 53 YUGOSLAVIA, Montenegro: between Murina (= Murino) and the Cakor-pass ( $20^{\circ} 04'$  E.,  $42^{\circ} 39'$  N.) estimated altitude 1400 m a.s.l.; shrubs of *Alnus* and *Betula*; May 20, 1954.
- Stat. 54 YUGOSLAVIA, Serbia (Kosmet): between Bjeluka and Han Jusuf ( $20^{\circ} 14'$  E.,  $42^{\circ} 39'$  N.); barren mountain slope, chiefly from under stones; May 20, 1954.
- Stat. 55 YUGOSLAVIA, Serbia (Kosmet): Padalište ( $20^{\circ} 36'$  E.,  $42^{\circ} 48'$  N.) cultivated grounds and meadows; May 20, 1954.
- Stat. 56 YUGOSLAVIA, Serbia (Kosmet): Vučitn (= Wutschitn) ( $20^{\circ} 57'$  E.,  $42^{\circ} 50'$  N.), marshy meadow; May 21, 1954.
- Stat. 57 YUGOSLAVIA, Serbia (Kosmet): Varoš ( $21^{\circ} 12'$  E.,  $42^{\circ} 19'$  N.) 49 km north-west of Skopje (= Skoplje; = Üsküb); marshy meadow; May 21, 1954.
- Stat. 58 YUGOSLAVIA, Macedonia: 5 km west of Skopje (= Skoplje; = Üsküb) ( $21^{\circ} 31'$  E.,  $42^{\circ} 00'$  N.); agricultural lands and meadows along the river shore; May 22, 1954.
- Stat. 59 YUGOSLAVIA, Macedonia: 5 km south of Tetovo (= Kalkandelen) ( $21^{\circ} 02'$  E.,  $41^{\circ} 58'$  N.); along the road; from under stones; May 22, 1954.
- Stat. 60 YUGOSLAVIA, Macedonia: Gjonovica ( $20^{\circ} 55'$  E.,  $41^{\circ} 39'$  N.); estimated altitude 1000 m a.s.l.; May 22, 1954.
- Stat. 61 YUGOSLAVIA, Macedonia: 3 km east of Klenovec ( $20^{\circ} 47'$  E.,  $41^{\circ} 30'$  N.); brook-valley with shrubs of *Quercus*; May 22, 1954.
- Stat. 62 YUGOSLAVIA, Macedonia: 3 km east of Klenovec ( $20^{\circ} 47'$  E.,  $41^{\circ} 30'$  N.); tributary of the Velika reka (= Welika); under muddy stones on the bank of the brook; May 22, 1954.
- Stat. 63 YUGOSLAVIA, Macedonia: 8 to 10 km south of Klenovec

- ( $20^{\circ} 50' E.$ ,  $41^{\circ} 25' N.$ ); estimated altitude 1000—1250 m a.s.l.; May 23, 1954.
- Stat. 64 YUGOSLAVIA, Macedonia: Ohridsko Jezero (= Lake Ohrid; = Lake Ochrid) near Struga ( $20^{\circ} 41' E.$ ,  $41^{\circ} 10' N.$ ); shore; May 23, 1954.
- Stat. 65 YUGOSLAVIA, Macedonia: 5 km south of Ohrid (=Ochrid; = Ochruda) ( $20^{\circ} 48' E.$ ,  $41^{\circ} 06' N.$ ); shrubbery with *Fagus*, *Ulmus*, *Corylus* and *Juglans*; May 23—27, 1954.
- Stat. 66 YUGOSLAVIA, Macedonia: shore of Ohridsko Jezero, 5 km south of Ohrid (= Ochrid; = Ochruda) ( $20^{\circ} 48' E.$ ,  $41^{\circ} 06' N.$ ); interstitial fauna of coarse, black sand and gravel. May 23, 1954. a) 50 cm above the waterline, b) 500 cm above the waterline. Groundwater opaque.
- Stat. 67 YUGOSLAVIA, Macedonia: Ohridsko Jezero, 5 km south of Ohrid (= Ochrid; = Ochruda) ( $20^{\circ} 48' E.$ ,  $41^{\circ} 06' N.$ ); surface tow of commercial fishermen; May 24, 1954.
- Stat. 68 YUGOSLAVIA, Macedonia: Ohridsko Jezero, 5 km south of Ohrid (= Ochrid; = Ochruda) ( $20^{\circ} 48' E.$ ,  $41^{\circ} 06' N.$ ); shore exploration; stones, *Phragmites*; May 24, 1954.
- Stat. 69 YUGOSLAVIA, Macedonia: Sveti Rasmu, between Ohrid (=Ochrid; = Ochruda) and Struga; insects on light; May 24, 1954.
- Stat. 70 YUGOSLAVIA, Macedonia: Bebunar, 3 km north-east of Ohrid (= Ochrid; = Ochruda); May 25—26, 1954.
- Stat. 71 YUGOSLAVIA, Macedonia: Ohridsko Jezero (= Lake Ohrid; = Lake Ochrid) off Struga ( $20^{\circ} 41' E.$ ,  $41^{\circ} 10' N.$ ); grab; depth 41—50 m; bottom: ooze; May 26, 1954.
- Stat. 72 YUGOSLAVIA, Macedonia: Ohridsko Jezero (= Lake Ohrid; = Lake Ochrid) off Struga ( $20^{\circ} 41' E.$ ,  $41^{\circ} 10' N.$ ); grab and dredge; depth 8 m; bottom: Chara; May 26, 1954.
- Stat. 73 YUGOSLAVIA, Macedonia: Ohridsko Jezero (= Lake Ohrid; = Lake Ochrid) off Struga ( $20^{\circ} 41' E.$ ,  $41^{\circ} 10' N.$ ); tow net; surface; May 26, 1954.
- Stat. 74 YUGOSLAVIA, Macedonia: Ohridsko Jezero (= Lake Ohrid; = Lake Ochrid) off Struga ( $20^{\circ} 41' E.$ ,  $41^{\circ} 10' N.$ ); torpedo net; depth 5—9 m; bottom: Chara, thread algae, *Phragmites*; May 26, 1954.
- Stat. 75 YUGOSLAVIA, Macedonia: Ohridsko Jezero, 5 km south of Ohrid (= Ochrid; = Ochruda) ( $20^{\circ} 48' E.$ ,  $41^{\circ} 06' N.$ ); torpedo net, employed from the shore; depth 0—1.5 m; May 26, 1954. a) bottom: sand and stones; b) bottom: sand and *Phragmites*.
- Stat. 76 YUGOSLAVIA, Macedonia: 5 km north-west of Struga ( $20^{\circ} 38' E.$ ,  $41^{\circ} 10' N.$ ); from under stones; May 26, 1954.
- Stat. 77 YUGOSLAVIA, Macedonia: Ohridsko Jezero, 5 km south of Ohrid (= Ochrid; = Ochruda) ( $20^{\circ} 48' E.$ ,  $41^{\circ} 06' N.$ ); small trawl, from 100 m offshore to the shore; bottom: Chara, stones, sand; May 27, 1954.
- Stat. 78 YUGOSLAVIA, Macedonia: 8 to 10 km south of Klenovec ( $20^{\circ} 50' E.$ ,  $41^{\circ} 25' N.$ ); estimated altitude 1000—1250 m a.s.l.; May 28, 1954.
- Stat. 79 YUGOSLAVIA, Macedonia: 7 km south-east of Gjonočica

- ( $20^{\circ} 47'$  E.,  $41^{\circ} 36'$  N.); Bukovik-pass; altitude 1184 m a.s.l.; shrubbery with *Corylus*, *Acer*, etc. May 28—29, 1954.
- Stat. 80 YUGOSLAVIA, Macedonia: 5 km east of Skopje (= Skoplje; = Üsküb) ( $21^{\circ} 34'$  E.,  $42^{\circ} 00'$  N.); agricultural land and wet meadows; May 29—30, 1954.
- Stat. 81 YUGOSLAVIA, Serbia: 15 km north-east of Vranje (= Vranja) ( $22^{\circ} 03'$  E.,  $42^{\circ} 38'$  N.); mountain slope along river-shore with *Acacia*, etc.; May 30, 1954.
- Stat. 82 YUGOSLAVIA, Serbia: 2 km north-west of Grn Studena ( $22^{\circ} 05'$  E.,  $43^{\circ} 16'$  N.); brook-valley, mountain slopes with forest of *Quercus*, etc.; chiefly from under stones and decaying leaves; May 30—June 2, 1954.
- Stat. 83 YUGOSLAVIA, Serbia: 2 km north-west of Grn Studena ( $22^{\circ} 05'$  E.,  $43^{\circ} 16'$  N.); small pool, near a source; about 10 m<sup>2</sup>; depth 0—20 cm; mud; many filamentous algae; torpedo net; May 31, 1954.
- Stat. 84 YUGOSLAVIA, Serbia: 2 km north-west of Grn Studena ( $22^{\circ} 05'$  E.,  $43^{\circ} 16'$  N.); little pool with small source; 0.5 m<sup>2</sup>; depth 10 cm; many mosses; no filamentous algae; tow net; May 31, 1954.
- Stat. 85 YUGOSLAVIA, Serbia: 2 km north-west of Grn Studena ( $22^{\circ} 05'$  E.,  $43^{\circ} 16'$  N.); torpedo net in quickly running brook; depth 30 cm; bottom: stones, sand; water turbid; likewise bank exploration; May 31, 1954.
- Stat. 86 YUGOSLAVIA, Serbia: Grn Studena ( $22^{\circ} 05'$  E.,  $43^{\circ} 16'$  N.); mountain slope; May 31, 1954.
- Stat. 87 YUGOSLAVIA, Serbia: Durinci ( $20^{\circ} 42'$  E.,  $44^{\circ} 30'$  N.), 41 km south of Beograd; shrubbery of *Quercus*; also marshy meadow; June 3—4, 1954.
- Stat. 88 YUGOSLAVIA, Serbia: Durinci ( $20^{\circ} 42'$  E.,  $44^{\circ} 30'$  N.), 41 km south of Beograd; aquatic animals from marsh; torpedo net; depth 0—40 cm; rushes; June 4, 1954.
- Stat. 89 YUGOSLAVIA, Slavonia: Batajnica, 20 km north-west of Beograd ( $20^{\circ} 16'$  E.,  $44^{\circ} 55'$  N.); agricultural land; June 4, 1954.
- Stat. 90 YUGOSLAVIA, Slavonia: Srijemski Karlovci (= Karlowitz), 10 km south-east of Novi Sad (= Neusatz) ( $19^{\circ} 55'$  E.,  $45^{\circ} 13'$  N.); in cistern of the pump on market place; June 5, 1954.
- Stat. 91 YUGOSLAVIA, Slavonia: Ilok ( $19^{\circ} 22'$  E.,  $45^{\circ} 15'$  N.); walls of the castle, from under stones; June 5, 1954.
- Stat. 92 YUGOSLAVIA, Slavonia: 5 km south-south-west of Ilok ( $19^{\circ} 20'$  E.,  $45^{\circ} 12'$  N.); deciduous forest with *Quercus*, *Acacia*, etc.; June 5—6, 1954.
- Stat. 92a YUGOSLAVIA, Slavonia: 5 km south-south-west of Ilok ( $19^{\circ} 20'$  E.,  $45^{\circ} 12'$  N.); tow net in well; June 6, 1954.
- Stat. 93 YUGOSLAVIA, Slavonia: Batrina (= Kapela Nova) ( $17^{\circ} 38'$  E.,  $45^{\circ} 15'$  N.); along the road, and from forest of *Quercus* on moist ground; June 6, 1954.
- Stat. 94 YUGOSLAVIA, Slavonia: Ivanić-grad (= Festung Ivanić) ( $16^{\circ} 32'$  E.,  $45^{\circ} 42'$  N.); along the road and in marshy meadow; June 6, 1954.

- Stat. 95 AUSTRIA, Steiermark: St. Marein ( $15^{\circ} 25'$  E.,  $47^{\circ} 29'$  N.); hay-field; June 8, 1954.
- Stat. 96 AUSTRIA, Nieder-Österreich: Baden, between Wienerneustadt and Wien ( $16^{\circ} 16'$  E.,  $48^{\circ} 01'$  N.); ruderal land along the road; June 8, 1954.
- Stat. 97 GERMANY, Bayern: 5 km west of Straubing ( $12^{\circ} 31'$  E.,  $48^{\circ} 53'$  N.); deciduous forest with *Betula*, *Alnus*; June 11, 1954.
- Stat. 98 GERMANY, Bayern: 22 km west of Würzburg; deciduous forest; June 11, 1954.
- Stat. 99 GERMANY, Nassau: Idstein, 18 km north of Wiesbaden ( $08^{\circ} 17'$  E.,  $50^{\circ} 13'$  N.); forest of *Fagus*; June 12, 1954.