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Botanica

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Bogdan HORVAT:

Aquatic Dance Flies of the Subfamily Hemerodromiinae (Diptera: Empididae) in Yugoslavia

Vodne muhe poplesovalke iz poddružine Hemerodromiinae (Diptera: Empididae) v Jugoslaviji

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Aquatic Dance Flies of the Subfamily Hemerodromiinae (Diptera: Empididae) in Yugoslavia

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ABSTRACT – Nineteen aquatic dance fly species (Diptera: Empididae) of the four Hemerodromiinae genera are recorded in the territory of Yugoslavia. Eleven of them are new to the Yugoslav fauna: *Chelifera aperticauda* Collin, 1927, *C. astigma* Collin, 1927, *C. concinnicauda* Collin, 1927, *C. flavella* (Zetterstedt, 1838), *C. pectinicauda* Collin, 1927, *C. precabunda* Collin, 1961, *C. pyrenaica* Vaillant, 1981, *Chelipoda vocatoria* (Fallén, 1816), *Hemerodromia melangyna* Collin, 1927, *H. oratoria* (Fallén, 1816) and *Phyllodromia melanocephala* (Fabricius, 1794). The distribution of the species is shown in the UTM grid (50 x 50 km) of Yugoslavia.

IZVLEČEK - VODNE MUHE POPLESOVALKE IZ PODDRUŽINE HEMERODROMIINAE (DIPTERA: EMPIDIDAE) V JUGOSLAVIJI - Na ozemlju Jugoslavije je ugotovljenih devetnajst vrst vodnih muh poplesovalk (Diptera: Empididae). Med njimi je za jugoslovansko favno enajst novih: *Chelifera aperticauda* Collin, 1927, *C. astigma* Collin, 1927, *C. concinnicauda* Collin, 1927, *C. flavella* (Zetterstedt, 1838), *C. pectinicauda* Collin, 1927, *C. precabunda* Collin, 1961, *C. pyrenaica* Vaillant, 1981, *Chelipoda vocatoria* (Fallén, 1816), *Hemerodromia melangyna* Collin, 1927, *H. oratoria* (Fallén, 1816) in *Phyllodromia melanocephala* (Fabricius, 1794). Razširjenost vrst je prikazana na UTM mreži (50 x 50 km) Jugoslavije.

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1. Introduction

The data from literature on the Yugoslav species of the subfamily Hemerodromiinae (Diptera: Empididae) are very fragmentary. VAILLANT (1978) records *Hemerodromia unilineata* Zetterstedt, 1842 and *Heleodromia pectinulata* (Strobl, 1898) for Yugoslav fauna. WAGNER (1981) cites *Chelifera stigmatica* (Schiner, 1862) species for Slovenia. In the Catalogue of Palaearctic Diptera: Empididae, CHVALA & WAGNER (1989) record four species in Yugoslavia: *Chelifera precatoria* (Fallén, 1816), *C. trapezina* (Zetterstedt, 1838), *Heleodromia pectinulata* (Strobl, 1898) and *Hemerodromia unilineata* Zetterstedt, 1842. Of the mentioned species, only *Heleodromia pectinulata* (Strobl, 1898) was not registered in the recent collected material.

Four smaller papers based on the recently collected material of the Yugoslav Hemerodromiinae species have already been published. They dealt with descriptions of four new species from Yugoslavia, the first with *Chelifera siveci* (WAGNER 1984), the second with *Chelifera macedonica* (WAGNER & NIESIOLOWSKI 1987), the third with *Hemerodromia slovenica* (HORVAT & WAGNER 1990), and the fourth with *Chelifera wagneri* (HORVAT 1990) species.

On the basis of a more intense collecting in the last three years, for the first time a more detailed overview of the Yugoslav aquatic dance fly fauna of the subfamily Hemerodromiinae is presented.

2. Material and Methods

The present paper is mainly based on the material of Hemerodromiinae collected by several recent entomological expeditions all over Yugoslavia, organized by the Slovene Museum of Natural History (leg. Horvat Bogdan - HB and Dr. Sivec Ignac - SI) in 1984 - 1989. The material has been collected also by: Hočevar Iztok - HI, Horvat Janez - HJ, Krušnik Ciril - KC, Dr. Kryštufek Boris - KB and Štangelj Mojmir - ŠM.

I examined 387 ♂♂ and 252 ♀♀. The alcohol-preserved specimens were dissected. The abdomens were boiled in hot KOH. Then they were washed in acetic acid. After a few minutes they were transferred in clove oil. The genitalia and their structures were studied in lateral and dorsal view in 75 % alcohol. The abdomens were stored in plastic microvials and joined together with the rest of animals and labels in the glass vials. The material is conserved in 75 % alcohol and deposited in the Slovene Museum of Natural History, Ljubljana.

3. List of Localities

All data on the finds of Hemerodromiinae species are presented according to the international UTM (Universal Transverse Mercator) grid (SIVEC 1980). In the list of localities the Yugoslav republics are stated in the following order: Slovenia (Slo), Croatia (Cro), Bosnia and Herzegovina (BH), Montenegro (Mtg), Serbia (Sb), and Macedonia (Ma). All localities are designated with 50 and 10 km UTM squares.

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SLOVENIA - Slo (Fig. 1):

UM 4: 1. r. Idrija, Sužid, Kobarid, UM82;
UM 4: 2. Staro Selo, Kobarid, UM82;
UM 4: 3. r. Soča, Žaga, UM83;
VM 1: 4. r. Sava, Zelenci, Podkoren, VM05;
VM 2: 5. r. Sava, Mojstrana, Jesenice, VM24 (WAGNER 1981, in litt.);
VM 2: 6. r. Zadnjica, Trenta, VM03;
VM 2: 7. r. Radovna, Radovna, VM23;
VM 4: 8. Vransko, VM92;
WM 1: 9. r. Radoljna, Lovrenc na Pohorju, WM25;
WM 2: 10. Mašin Žaga, Lovrenc na Pohorju, WM24;
WM 2: 11. Pesek, Pohorje, WM24;
WM 2: 12. Jurgovo, Oplotnica, Pohorje, WM24;
WM 2: 13. Lukanja, Oplotnica, Pohorje, WM34;
WM 2: 14. r. Bistrica, Slovenska Bistrica, WM44;
VL 1: 15. r. Horjulščica, Horjul, VL49;
VL 1: 16. r. Unec, Planina, Postojna, VL47;
VL 2: 17. Sušak, Novokračine, VL43;
VL 3: 18. r. Bistrica, Sodražica, VL76;
VL 3: 19. Zlati Rep, Ortnek, VL77;

CROATIA - Cro (Fig. 1):

VL 2: 20. r. Bračana, Abramci, Buzet, VL13;
VL 2: 21. r. Bračana, Osoje, Buzet, VL12;
VL 4: 22. Golik, Brod na Kolpi, VL93;
WL 2: 23. r. Dobra, Vrbovsko, WL02;
WL 3: 24. Trnava, Medvednica, Zagreb, WL88;
YL 2: 25. Velika, Slavonska Požega, YL03;
YL 2: 26. Jankovac, Papuk, Slavonska Požega, YL04;
WK 3: 27. r. Korana, Plitvička Jezera, WK57;
XJ 1: 28. r. Krka, Krčič, Knin, XJ07;
XJ 1: 29. Cetina, XJ16;
BN 4: 30. r. Ljuta, Konavovski Dvori, BN81;

BOSNIA AND HERZEGOVINA - BH (Fig. 1):

YH 1: 31. r. Studenčica, D. Studenci, Čapljina, YH18;
YH 1: 32. Proboj, Čapljina, YH08;
BP 4: 33. Obrnja, Kalinovik, BP80;
BP 4: 34. Rogoj, Dobro Polje, BP92;
BP 4: 35. Dobro Polje, BP92;
BP 4: 36. Tošići, Sarajevo, BP93;
CQ 2: 37. Brlošci, Tuzla, CQ10;
CN 1: 38. r. Sutjeska, Grab, CN09;

MONTENEGRO - Mtg (Fig. 1):

CN 1: 39. r. Zukva, Šavnik, CN45;
CN 3: 40. r. Somina, Somina, Šavnik, CN65;
CN 4: 41. r. Morača, Požnja, Mioska, CN64;
CN 4: 42. Crkvine, Kolašin, CN73;
CN 4: 43. Kraljske Bare, Kolašin, CN83;

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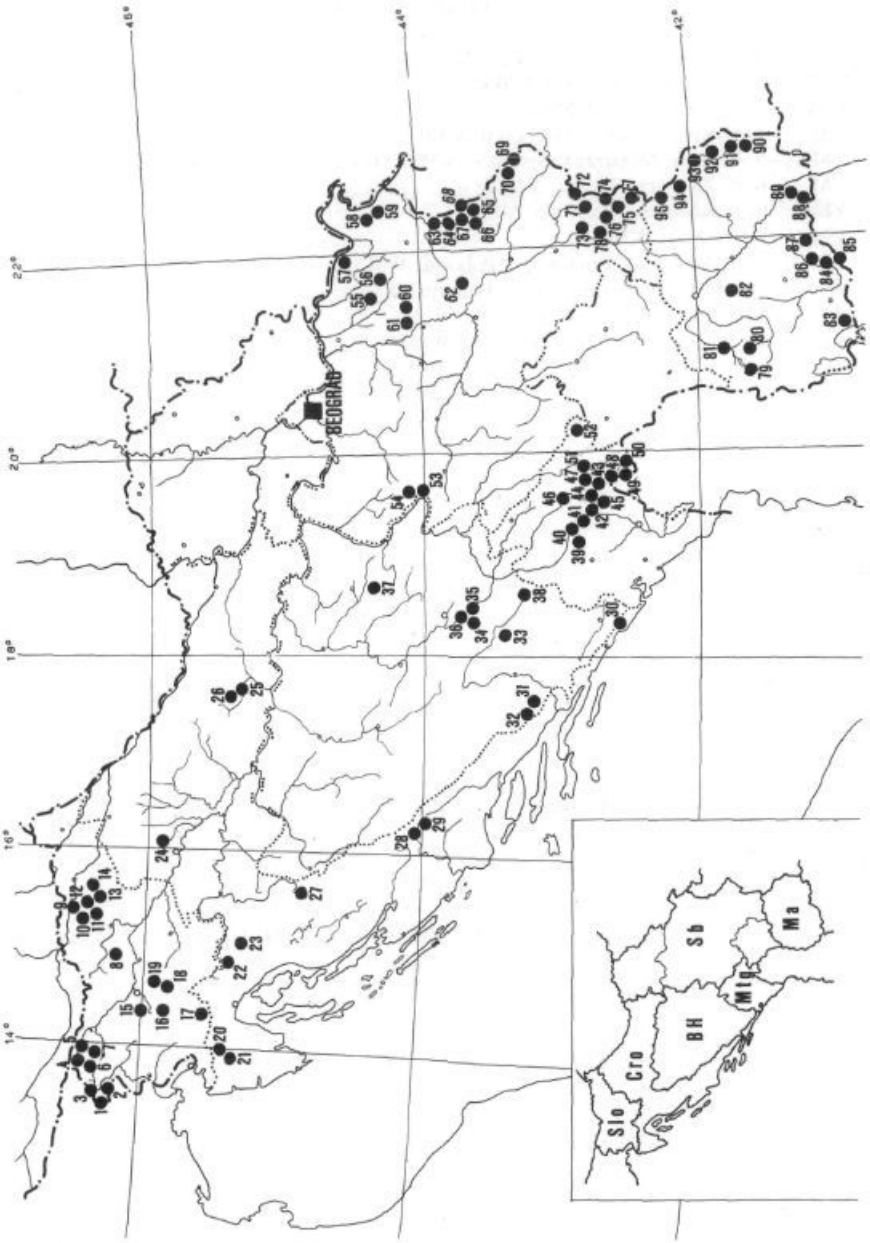

Fig. 1. Map of Yugoslavia: the sampling points are marked with black circles and numbers (see text: list of localities).

Sl. 1. Zemljevid Jugoslavije: mesta zbiranja materiala so označena s temnimi krogi in številkami (glej tekst: pregled lokalitet).

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CN 4: 44. r. Tara, Skrbuša, Kolašin, CN83;
CN 4: 45. r. Tara, Jabuka, Kolašin, CN83;
CN 4: 46. r. Tara, Podbišče, Mojkovac, CN84;
CN 4: 47. Mušovića Rijeka, Kolašin, CN84;
CN 4: 48. Gnjili Potok, Andrijevica, CN93;
DN 2: 49. r. Zlorečica, Kruška, Andrijevica, DN01;
DN 2: 50. r. Zlorečica, Kuti, Andrijevica, DN01;
DN 2: 51. Trebačka r., Trepča, Ivangrad, DN03;
DN 2: 52. r. Ibar, Rožaje, DN34;

SERBIA - Sb (Fig. 1):

CP 3: 53. Rogačica, Titovo Užice, CP97;
CP 3: 54. Pašna Ravan, Bajina Bašta, Povljen Mts., CP98;
EQ 2: 55. Melnica, Petrovac, Požarevac, EQ41;
EQ 4: 56. Osanica, Požarevac, Homoljske Planine, EQ50;
EQ 4: 57. Lepenski Vir, Donji Milanovac, EQ83;
FQ 2: 58. Vratna, Negotin, FQ01;
FQ 2: 59. r. Turija, Jabukovac, Negotin, FQ00;
EP 3: 60. r. Resava, Strmosten, Beljanica Mts., EP58;
EP 3: 61. r. Resava, Despotovac, Beljanica Mts., EP68;
EP 4: 62. Skrobnica, Knjaževac, EP82;
FP 1: 63. r. Šaška, Vratarnica, Zaječar, FP05;
FP 2: 64. Toplik, Zaječar, FP04;
FP 2: 65. Radičevac, Knjaževac, FP12;
FP 2: 66. Šarbanovac, Knjaževac, Stara Planina, FP12;
FP 2: 67. Ošljane, Knjaževac, Stara Planina, FP13;
FP 2: 68. Novo Korito, Knjaževac, Stara Planina, FP13;
FN 3: 69. Jelovica, Pirot, Stara Planina, FN68;
FN 3: 70. Dojkinci, Pirot, Stara Planina, FN58;
FN 2: 71. Vlasina Okruglica, FN12;
FN 2: 72. r. Jerma, Klisura, Vlasina, FN12;
FN 2: 73. Promaja, Vlasina Surdulica, FN02;
FN 2: 74. Donja Lisina, Bosilegrad, FN11;
FN 2: 75. Donja Ljubata, Bosilegrad, FN10;
FN 2: 76. Gornja Ljubata, Bosilegrad, FN00;
FM 1: 77. Ribarci, Bosilegrad, FM29;
EN 4: 78. Kriva Feja, Vranje, EN91;

MACEDONIA - Ma (Fig. 1):

DM 4: 79. Mavrovo, DM70;
DM 4: 80. Tajmište, Kičevo, DM81;
DM 4: 81. Lešnica, Zdunje, Gostivar, DM82;
EM 2: 82. Gorno Begovo, Begovo Polje, Jakupica Mts., 1960 m a.s.l., EM32;
EL 2: 83. Brajčinska r., Brajčino, Pelister, EL12;
EL 4: 84. Konjarska r., Skočivir, Bitola, EL53;
EL 4: 85. Kajmakčalan, cca. 1800 m a.s.l., Bitola, EL63;
EL 4: 86. Bela r., Budimirci, Bitola, EL64;
EL 3: 87. Majden, Kavadarci, EL75;
FL 1: 88. Konska r., Konsko, Gevgelija, FL15;
FL 1: 89. Sermenli r., Sermenin, Gevgelija, FL16;

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FM 4: 90. Cironska r., Avramci, Ratevo, FM50;
FM 4: 91. Ratevska r., Ratevo, Berovo, FM51;
FM 4: 92. r. Želevica, Želevica, Istevnik, FM53;
FM 4: 93. Zvegor, Delčevo, FM54;
FM 1: 94. r. Kamenica, Osogovske Planine, FM35 (WAGNER & NIESIOLOWSKI 1987, in litt.);
FM 1: 95. Ruen, Kriva Palanka, FM26;

4. Faunistics

4.1. Genus *Chelifera* Macquart, 1823

Chelifera aperticauda Collin, 1927

Material:
MONTENEGRO:
CN 3: r. Somina, Somina, Šavnik, CN65, 20.9.1987, 2 ♂♂ , (HB, SI);
CN 4: r. Tara, Jabuka, Kolašin, CN83, 23.9.1987, 1 ♂ , (HB, SI);

R e m a r k s: *Chelifera aperticauda* is first recorded for theYugoslav fauna. Flight time in Yugoslavia: September. This uncommon species is known from Great Britain, Belgium, Austria (CHVALA & WAGNER 1989), Poland (NIESIOLOWSKI 1990), and Yugoslavia(Fig. 2).

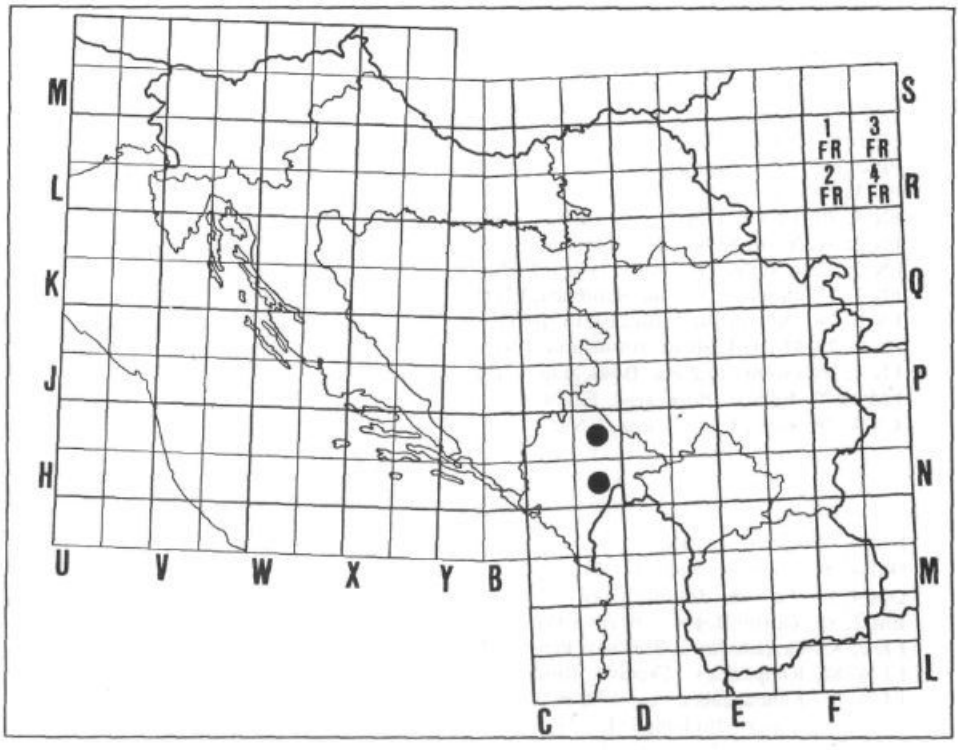

Fig. 2. *Chelifera aperticauda* Collin, 1927 in Yugoslavia: 50 km UTM grid.
Sl. 2. *Chelifera aperticauda* Collin, 1927 v Jugoslaviji: UTM mreža 50 × 50 km.

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Chelifera astigma Collin, 1927

Material:

SLOVENIA:

WM 2: Pesek, Pohorje, WM24, 3.9.1988, 1 ♂, (HB, SI); Lukanja, Oplotnica, Pohorje, WM34, 7.9.1987, 3 ♂♂, (SI);

SERBIA:

FN 3: Dojkinci, Pirot, Stara Planina, FN58, 13.6.1985, 1 ♂, (SI, ŠM);

R e m a r k s: *Chelifera astigma* is new to the fauna of Yugoslavia. The adults were collected in June and September. Distribution: Great Britain, Federal Republic of Germany, German Democratic Republic, Czechoslovakia, France (CHVALA & WAGNER 1989), Poland (NIESIOLOWSKI 1990), and Yugoslavia (Fig. 3).

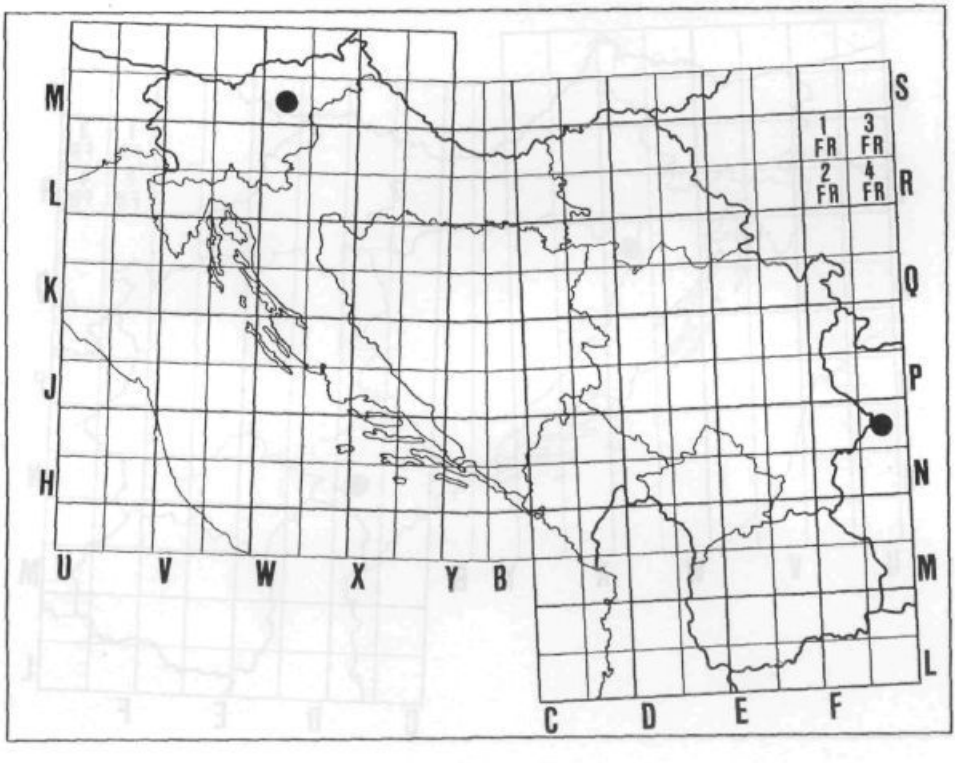

Fig. 3. *Chelifera astigma* Collin, 1927 in Yugoslavia: 50 km UTM grid.
Sl. 3. *Chelifera astigma* Collin, 1927 v Jugoslaviji: UTM mreža 50 × 50 km.

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***Chelifera concinnicauda* Collin, 1927**

Material:
CROATIA:
WK 3: r. Korana, Plitvička Jezera, WK57, 13.9.1987, 1 ♂ , 4 ♀♀,(HB, SI);
MONTENEGRO:
CN 4: Crkvine, Kolašin, CN73, 22.9.1987, 1 ♂ , 2 ♀♀, (HB, SI); Kraljske Bare, Kolašin, CN83, 23.9.1987, 1 ♂ , (HB, SI); r. Tara,Skrbuša, Kolašin, CN83, 21.9.1987, 2 ♂♂ , (HB, SI); r. Tara, Jabuka, Kolašin, CN83, 23.9.1987, 1 ♂ , 2 ♀♀, (HB, SI);

R e m a r k s: *Chelifera concinnicauda* is new to the fauna of Yugoslavia. Flight time in Yugoslavia: September. Distribution: Sweden, Finland, Great Britain, Belgium, Federal Republic of Germany, Denmark, France, Czechoslovakia, Mongolia (CHVALA & WAGNER 1989), Poland (NIESIOLOWSKI 1990), and Yugoslavia (Fig. 4).

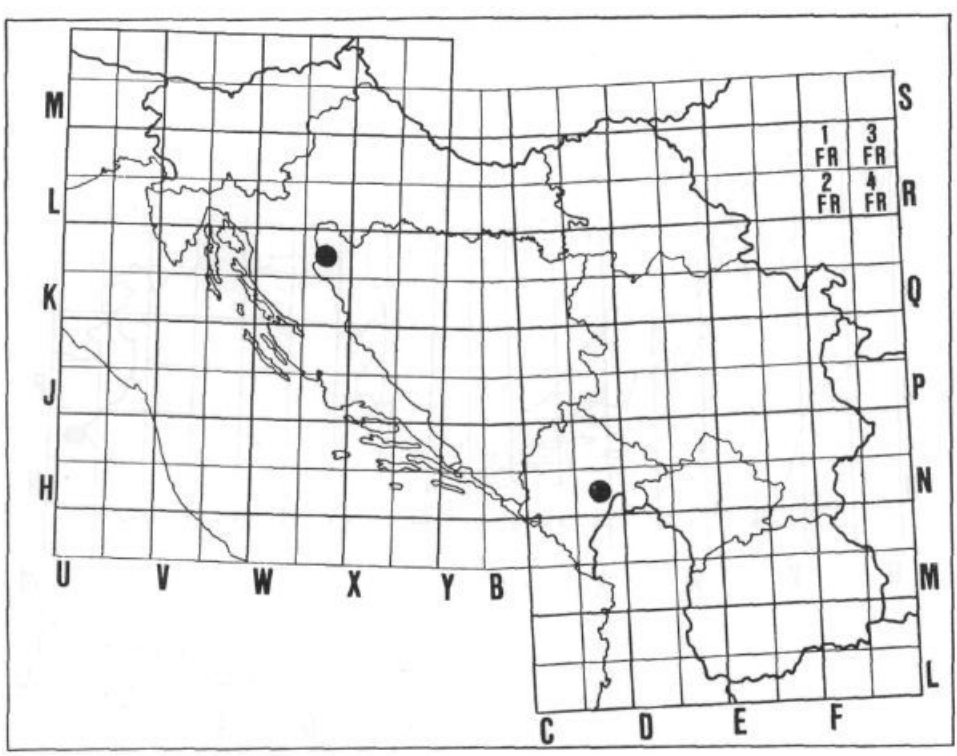

Fig. 4. *Chelifera concinnicauda* Collin, 1927 in Yugoslavia: 50 km UTM grid.
Sl. 4. *Chelifera concinnicauda* Collin, 1927 v Jugoslaviji: UTM mreža 50 × 50 km.

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Chelifera flavella (Zetterstedt, 1838)

Material:
CROATIA:
WL 3: Trnava, Medvednica, Zagreb, WL88, 14.5.1986, 1 ♂ , (HB, SI);

R e m a r k s: *Chelifera flavella* is first recorded for the Yugoslav fauna. Flight time in Yugoslavia: May. Distribution: Norway, Sweden, Great Britain, Belgium, Federal Republic of Germany, German Democratic Republic, Poland, France, Switzerland, Italy, Austria, Czechoslovakia, Hungary, Soviet Union: Georgian SSR (CHVALA & WAGNER 1989), and Yugoslavia (Fig. 5).

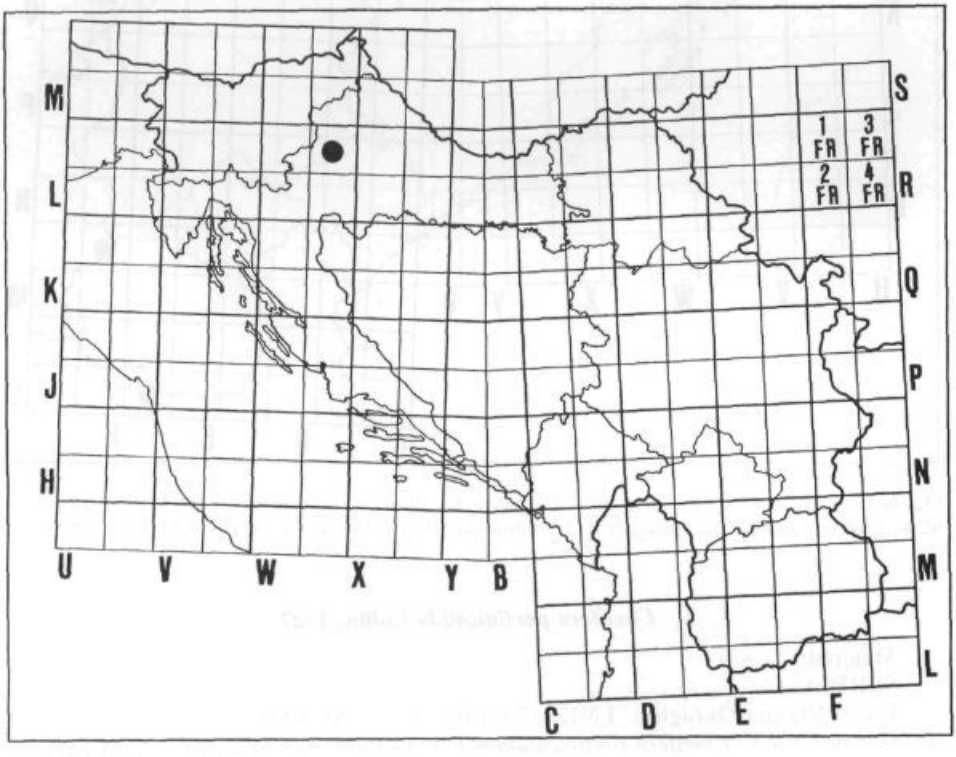

Fig. 5. *Chelifera flavella* (Zetterstedt, 1838) in Yugoslavia: 50 km UTM grid.
Sl. 5. *Chelifera flavella* (Zetterstedt, 1838) v Jugoslaviji: UTM mreža 50 × 50 km.

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Chelifera macedonica Wagner & Niesiolowski, 1987

Material:
MACEDONIA:
EL 4: Kajmakčalan, cca. 1800 m a.s.l., Bitola, EL63, 24.9.1988, 1 ♂ , 4 ♀♀, (HB, SI);
References:
WAGNER & NIESIOLOWSKI (1987, in litt.): MACEDONIA: FM 1: r. Kamenica, Osogovske Planine, FM35, 15.9.1985, 10 ♂♂ , 9 ♀♀ (type material), leg. Sivec & Horvat.
R e m a r k s: *Chelifera macedonica* is a rare species, known only from two localities in Macedonia (Yugoslavia, Fig. 6). The adults were collected in September.

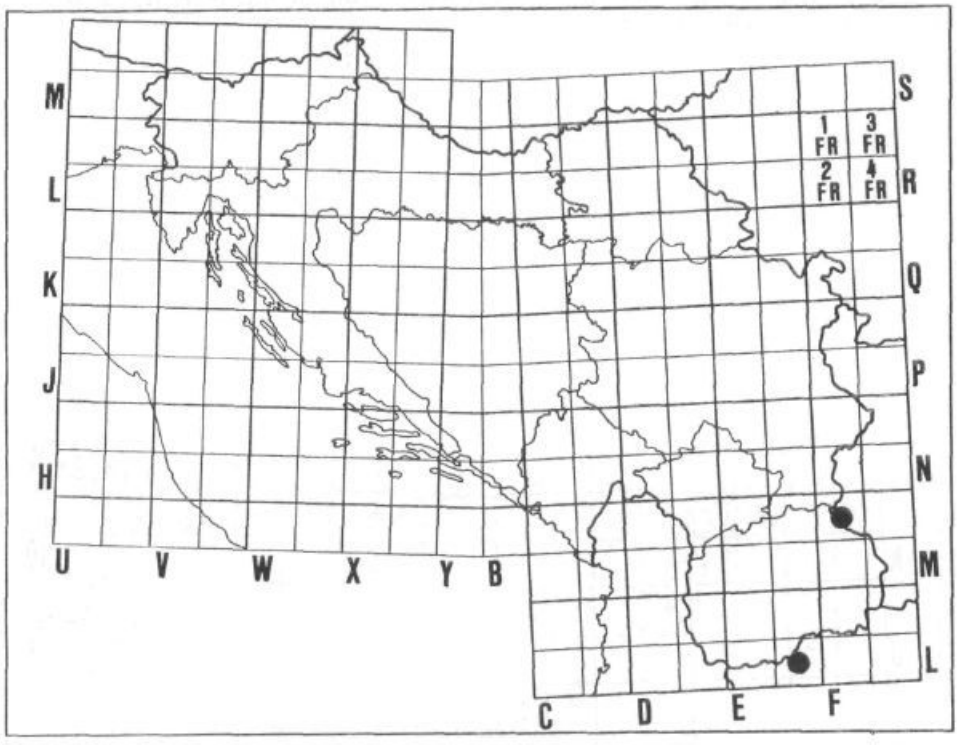

Fig. 6. *Chelifera macedonica* Wagner & Niesiolowski, 1987 in Yugoslavia: 50 km UTM grid.
Sl. 6. *Chelifera macedonica* Wagner & Niesiolowski, 1987 v Jugoslaviji: UTM mreža 50 × 50 km.

Chelifera pectinicauda Collin, 1927

Material:
SERBIA:
FN 2: Vlasina Okruglica, FN12, 12.6.1985, 1 ♂ , (SI, ŠM);
R e m a r k s: *Chelifera pectinicauda* is new to the fauna of Yugoslavia. Flight time in Yugoslavia: June. This uncommon species is known from Great Britain, Poland, France (CHVALA & WAGNER 1989), and Yugoslavia (Fig. 7).

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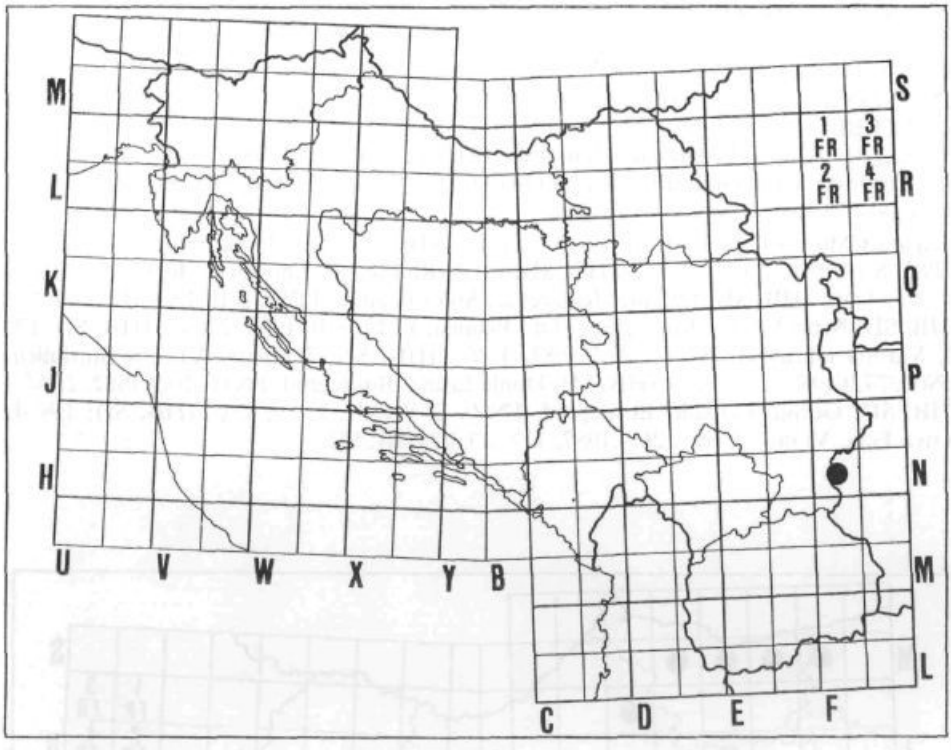

Fig. 7. *Chelifera pectinicauda* Collin, 1927 in Yugoslavia: 50 km UTM grid.
Sl. 7. *Chelifera pectinicauda* Collin, 1927 v Jugoslaviji: UTM mreža 50 × 50 km.

Chelifera precabunda Collin, 1961

Material:

SLOVENIA:

UM 4: r. Idrija, Sužid, Kobarid, UM82, 10.5.1989, 1 ♂ , 1 ♀, (HB, SI); VM 2: r. Radovna, Radovna, VM23, 24.7.1989, 1 ♂ , (HB); VM 4: Vransko, VM92, 29.9.1986, 1 ♂ , (HB, SI); WM 2: Mašin Žaga, Lovrenc na Pohorju, WM24, 11.9.1984, 1 ♂ , (SI); Jurgovo, Oplotnica, Pohorje, WM24, 3.9.1988, 1 ♂ , (HB, SI); r. Bistrica, Slovenska Bistrica, WM44, 29.5.1989, 3 ♂♂ , (HB);

CROATIA:

VL 4: Golik, Brod na Kolpi, VL93, 12.9.1987, 2 ♂♂ , (HB, SI); WL 3: Trnava, Medvednica, Zagreb, WL88, 14.5.1986, 1 ♂ , 1 ♀, (HB, SI); YL 2: Velika, Slavonska Požega, YL03, 13.10.1986, 1 ♂ , (HB, SI); Jankovac, Papuk, Slavonska Požega, YL04, 6.7.1989, 1 ♂ , (HB, KB);

BOSNIA AND HERZEGOVINA:

BP 4: Rogoj, Dobro Polje, BP92, 15.9.1987, 6 ♂♂ , 10 ♀♀, (HB, SI); Tošići, Sarajevo, BP93, 15.9.1987, 1 ♂ , (HB, SI); CQ 2: Brlošci, Tuzla, CQ10, 5.10.1986, 1 ♂ , 1 ♀, (HB, SI);

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MONTENEGRO:

CN 3: r. Somina, Somina, Šavnik, CN65, 20.9.1987, 5 ♂♂ , (HB, SI); CN 4: r. Morača, Požnja, Mioska, CN64, 22.9.1987, 1 ♂ , (HB, SI); r. Tara, Jabuka, Kolašin, CN83, 23.9.1987, 1 ♂ , (HB, SI);

SERBIA:

EQ 4: Osanica, Požarevac, Homoljske Planine, EQ50, 6.5.1986, 3 ♂♂ , 2 ♀♀, (HB, SI); Lepenski Vir, Donji Milanovac, EQ83, 9.10. 1986, 1 ♂ , (HB, SI); FQ 2: r. Turija, Jabukovac, Negotin, FQ00, 9.10.1986, 1 ♂ , 1 ♀, (HB, SI); EP 3: r. Resava, Strmosten, Beljanica Mts., EP58, 7.10.1986, 5 ♂♂ , 2 ♀♀, (HB, SI); EP 4: Skrobnica, Knjaževac, EP82, 8.10.1986, 2 ♂♂ , 2 ♀♀, (HB, SI); FP 2: Radičevac, Knjaževac, FP12, 8.10.1986, 8 ♂♂ , 4 ♀♀, (HB, SI); Ošljane, Knjaževac, Stara Planina, FP13, 8.10.1986, 1 ♂ , 2 ♀♀, (HB, SI); Novo Korito, Knjaževac, Stara Planina, FP13, 8.10.1986, 2 ♂♂ , (HB, SI); FN 2: Vlasina Okruglica, FN12, 27.9.1987, 1 ♂ , (HB, SI); Promaja, Vlasina Surdulica, *FN02, 27.9.1987, 1 ♂ , 1 ♀, (HB, SI)*; *Donja Lisina, Bosilegrad, FN11, 26.9.1987, 2 ♂♂* , (HB, SI); Gornja Ljubata, Bosilegrad, FN00, 26.9.1987, 1 ♂ , 1 ♀, (HB, SI); EN 4: Kriva Feja, Vranje, EN91, 26.9.1987, 1 ♂ , 1 ♀, (HB, SI);

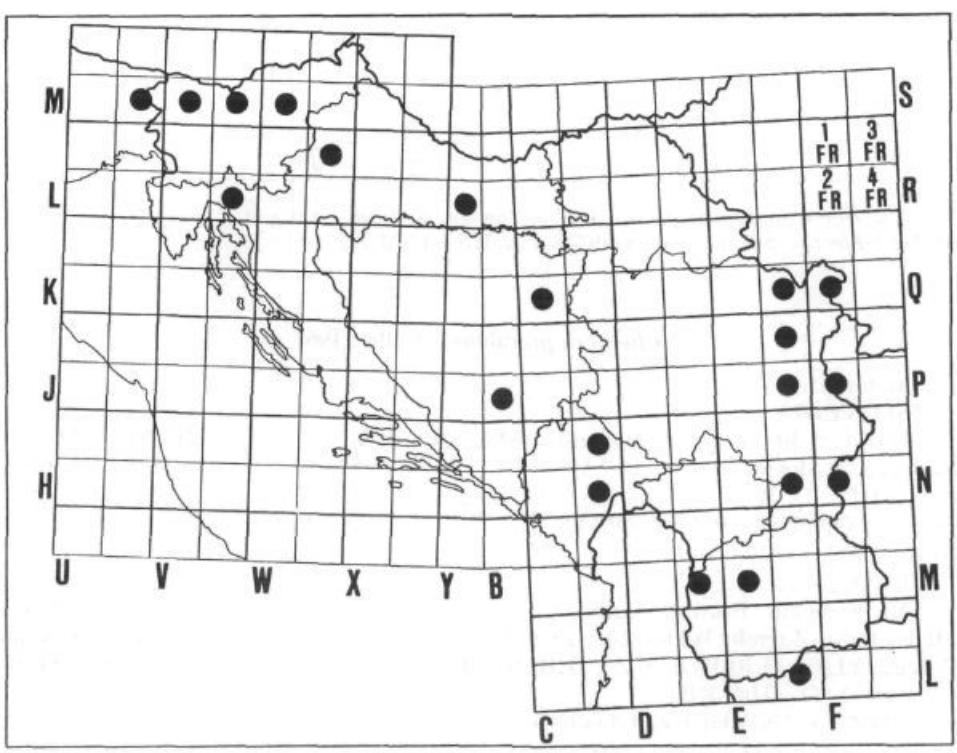

Fig. 8. *Chelifera precabunda* Collin, 1961 in Yugoslavia: 50 km UTM grid.
Sl. 8. *Chelifera precabunda* Collin, 1961 v Jugoslaviji: UTM mreža 50 × 50 km.

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MACEDONIA:

DM 4: Tajmište, Kičevo, DM81, 3.10.1988, 2 ♂♂ , (HB, SI); EM 2: Gorno Begovo, Begovo Polje, Jakupica Mts., 1960 m a.s.l., EM32, 26.-28.6.1989, 3 ♂♂ , 2 ♀♀, (HB, KB); EL 4: Konjarska r., Skočivir, Bitola, EL53, 25.9.1988, 4 ♂♂ , 2 ♀♀, (HB, SI); Bela r., Budimirci, Bitola, EL64, 24.9.1988, 1 ♂ , 2 ♀♀, (HB, SI);

R e m a r k s: *Chelifera precabunda* is first recorded for the Yugoslav fauna. It was found in 21 UTM squares of 50 x 50 km, all over Yugoslavia. Flight period in Yugoslavia: from May to October. It is a widely distributed and common species in Europe. Distribution: Spain, France, Great Britain, Federal Republic of Germany, Belgium, German Democratic Republic, Hungary, Bulgaria, Poland, Czechoslovakia, Soviet Union: Georgian SSR (CHVALA & WAGNER 1989), and Yugoslavia (Fig. 8).

Chelifera precatoria (Fallén, 1816)

Material:

SLOVENIA:

VL 3: r. Bistrica, Sodražica, VL76, 5.10.1989, 1 ♂ , 1 ♀, (HB, SI);

CROATIA:

XJ 1: r. Krka, Krčič, Knin, XJ07, 2.5.1989, 1 ♂ , (HB, SI); Cetina, XJ16, 14.9.1987, 1 ♂ , 1 ♀, (HB, SI);

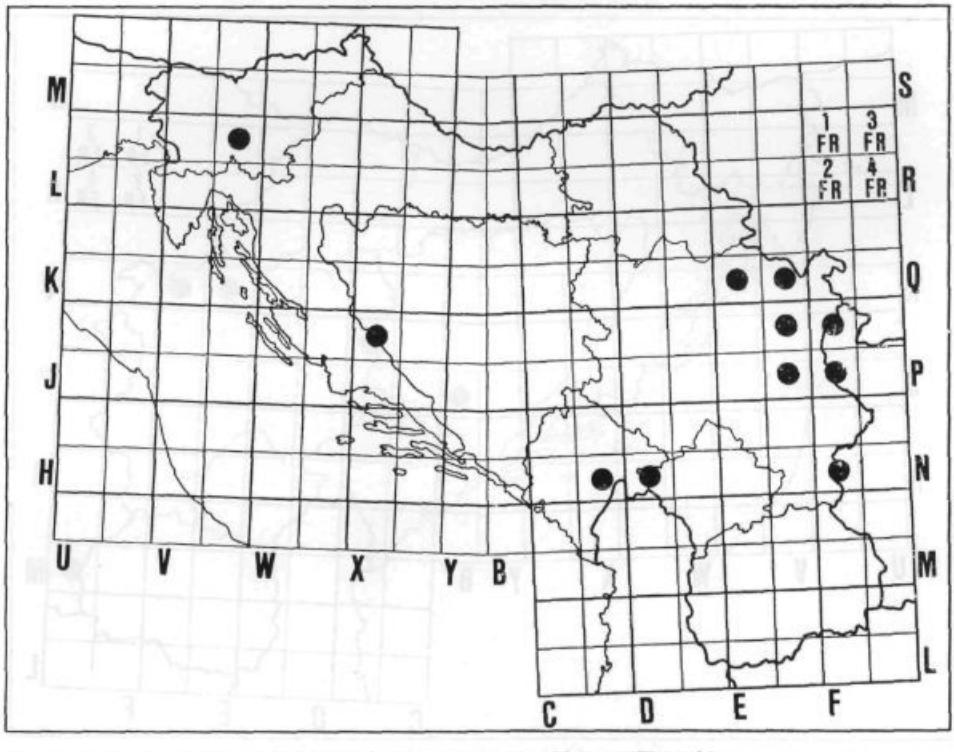

Fig. 9. *Chelifera precatoria* (Fallén, 1816) in Yugoslavia: 50 km UTM grid.
Sl. 9. *Chelifera precatoria* (Fallén, 1816) v Jugoslaviji: UTM mreža 50 × 50 km.

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MONTENEGRO:

CN 4: r. Tara, Jabuka, Kolašin, CN83, 23.9.1987, 1 ♂ , (HB, SI); Gnjili Potok, Andrijevica, CN93, 24.9.1987, 1 ♂ , 1 ♀, (HB, SI); DN 2: Trebačka r., Trepča, Ivangrad, DN03, 24.9.1987, 1 ♂ , 2 ♀♀, (HB, SI);

SERBIA:

EQ 2: Melnica, Petrovac, Požarevac, EQ41, 6.5.1986, 1 ♂ , (HB, SI); EQ 4: Osanica, Požarevac, Homoljske Planine, EQ50, 6.5.1986, 10 ♂♂ , 12 ♀♀, (HB, SI); Lepenski Vir, Donji Milanovac, EQ83, 9.10. 1986, 1 ♂ , (HB, SI); EP 3: r. Resava, Strmosten, Beljanica Mts., EP58, 7.10.1986, 1 ♂ , (HB, SI); EP 4: Skrobnica, Knjaževac, EP82, 8.10.1986, 4 ♂♂ , 4 ♀♀, (HB, SI); FP 1: r. Šaška, Vratarnica, Zaječar, FP05, 7.5.1986, 1 ♂ , (HB, SI); FP 2: Toplik, Zaječar, FP04, 8.10. 1986, 5 ♂♂ , 4 ♀♀, (HB, SI); Novo Korito, Knjaževac, Stara Planina, FP13, 8.10.1986, 1 ♂ , 1 ♀, (HB, SI); FN 2: Donja Ljubata, Bosilegrad, FN10, 26.9.1987, 1 ♂ , (HB, SI);

R e m a r k s: *Chelifera precatoria* is a wide-spread and very common species throughout Europe. Distribution: Norway, Sweden, Finland, Ireland, Great Britain, Belgium, Denmark, Federal Republic of Germany, German Democratic Republic, Poland, Czechoslovakia, Austria, Hungary, Spain, France, Italy, Roumania, Greece: Crete, Soviet Union: Estonian SSR, Latvian SSR, and Yugoslavia (CHVALA & WAGNER 1989). It was found in all Yugoslav republics (Fig. 9).

***Chelifera pyrenaica* Vaillant, 1981**

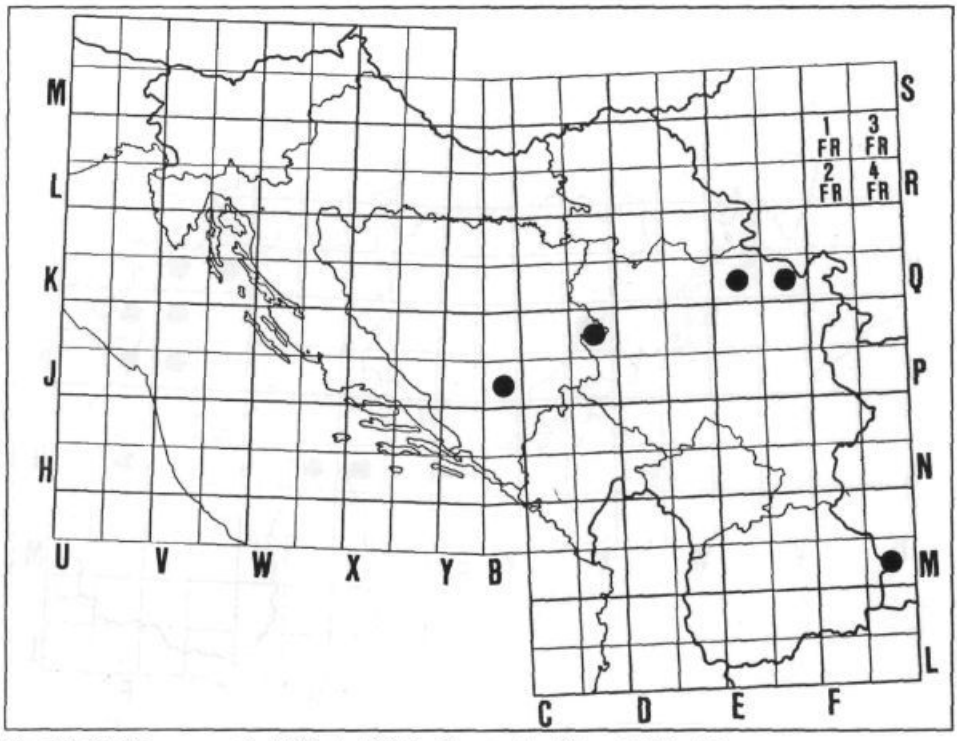

Fig. 10. *Chelifera pyrenaica* Vaillant, 1981 in Yugoslavia: 50 km UTM grid.
Sl. 10. *Chelifera pyrenaica* Vaillant, 1981 v Jugoslaviji: UTM mreža 50 × 50 km.

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Material:
BOSNIA AND HERZEGOVINA:
BP 4: Rogoj, Dobro Polje, BP92, 15.9.1987, 1 ♂ , (HB, SI); Dobro Polje, BP92, 15.9.1987, 1 ♂ , 2 ♀♀, (HB, SI);
SERBIA:
CP 3: Rogačica, Titovo Užice, CP97, 6.10.1986, 1 ♂ , (HB, SI); Pašna Ravan, Bajina Bašta, Povljen Mts., CP98, 6.10.1986, 1 ♂ , 1 ♀, (HB, SI); EQ 2: Melnica, Petrovac, Požarevac, EQ41, 6.5.1986, 1 ♂ , 1 ♀, (HB, SI); EQ 4: Osanica, Požarevac, Homoljske Planine, EQ50, 6.5.1986, 2 ♂♂ , (HB, SI);
MACEDONIA:
FM 4: Ratevska r., Ratevo, Berovo, FM51, 29.5.1988, 1 ♂ , (HB, KB);
R e m a r k s: *Chelifera pyrenaica* is new to the fauna of Yugoslavia. Flight time in Yugoslavia: May, September, October. Distribution: Federal Republic of Germany, Spain, France, Czechoslovakia (CHVALA & WAGNER 1989), and Yugoslavia (Fig. 10).

Chelifera siveci Wagner, 1984

Material:
SLOVENIA:
VM 1: r. Sava, Zelenci, Podkoren, VM05, 10.6.1989, 1 ♂ , 1 ♀, (HB);

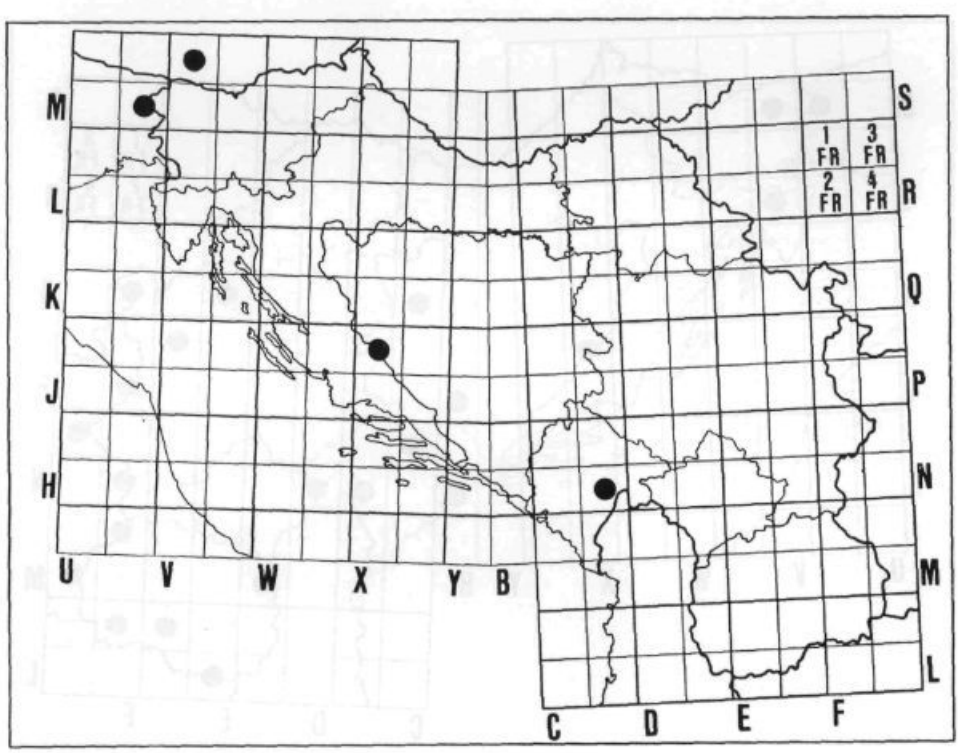

Fig. 11. *Chelifera siveci* Wagner, 1984 in Yugoslavia: 50 km UTM grid.
Sl. 11. *Chelifera siveci* Wagner, 1984 v Jugoslaviji: UTM mreža 50 × 50 km.

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CROATIA:

XJ 1: r. Krka, Krčič, Knin, XJ07, 23.4.1987, 2 ♂♂ , (HB, SI), 2.5. 1989, 1 ♂ , 1 ♀, (HB, SI);

MONTENEGRO:

CN 4: r. Tara, Skrbuša, Kolašin, CN83, 21.9.1987, 1 ♂ , (HB, SI);

References:

WAGNER (1984, in litt.): SLOVENIA: UM 4: r. Idrija, Sužid, Kobarid, UM82, 21.5.1983, 1 ♂ (type material), leg. Sivec;

R e m a r k s: This uncommon species is known from Yugoslavia only (Fig. 11). The adults of *Chelifera siveci* were collected from April to June, and in September.

Chelifera stigmatica (Schiner, 1862)

Material:

SLOVENIA:

UM 4: Staro Selo, Kobarid, UM82, 10.5.1989, 1 ♂ , 2 ♀♀, (HB, SI); VL 2: Sušački potok, Sušak, Novokračine, VL43, 22.5.1986, 1 ♂ , (HB, KC, SI);

CROATIA:

XJ 1: Cetina, XJ16, 14.9.1987, 1 ♂ , (HB, SI); BN 4: r. Ljuta, Konavovski Dvori, BN81, 18.9.1987, 1 ♂ , (HB, SI);

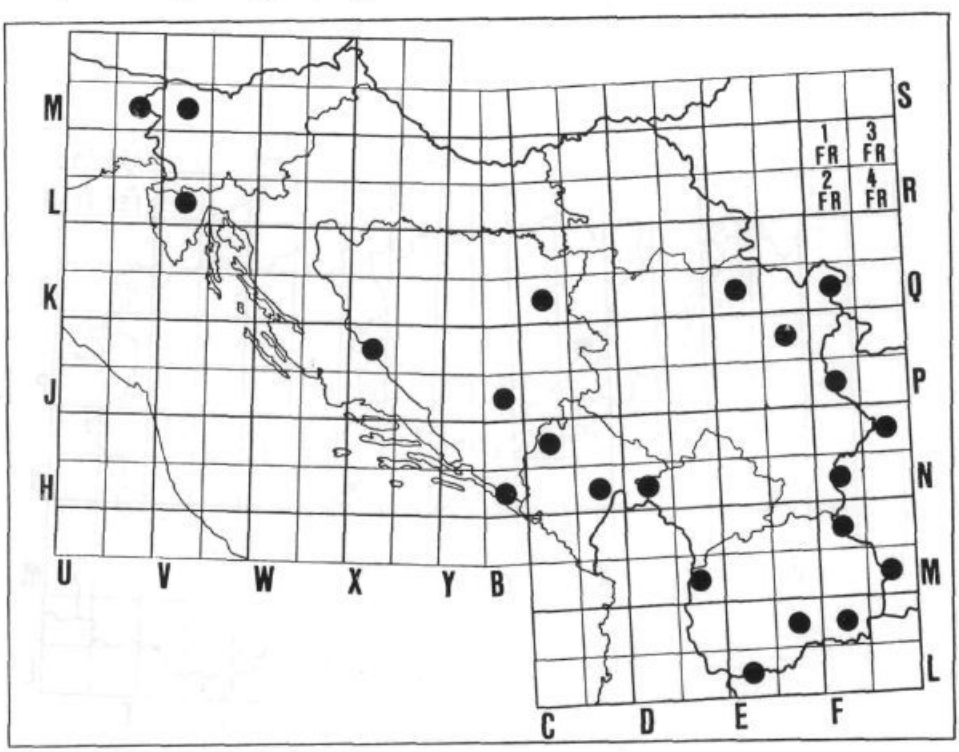

Fig. 12. *Chelifera stigmatica* (Schiner, 1862) in Yugoslavia: 50 km UTM grid.
Sl. 12. *Chelifera stigmatica* (Schiner, 1862) v Jugoslaviji: UTM mreža 50 × 50 km.

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BOSNIA AND HERZEGOVINA:

BP 4: Rogoj, Dobro Polje, BP92, 15.9.1987, 1 ♂ , 1 ♀, (HB, SI); Tošići, Sarajevo, BP93, 15.9.1987, 1 ♂ , (HB, SI); CQ 2: Brlošci, Tuzla, CQ10, 5.10.1986, 1 ♂ , (HB, SI); CN 1: r. Sutjeska, Grab, CN09, 17.9.1987, 1 ♂ , (HB, SI);

MONTENEGRO:

CN 4: r. Morača, Požnja, Mioska, CN64, 22.9.1987, 2 ♂♂ , (HB, SI); Kraljske Bare, Kolašin, CN83, 23.9.1987, 2 ♂♂ , 1 ♀, (HB, SI); r. Tara, Skrbuša, Kolašin, CN83, 21.9.1987, 5 ♂♂ , 2 ♀♀, (HB, SI); r. Tara, Jabuka, Kolašin, CN83, 23.9.1987, 9 ♂♂ , 3 ♀♀, (HB, SI); DN 2: Trebačka r., Trepča, Ivangrad, DN03, 24.9.1987, 1 ♂ , (HB, SI); r. Ibar, Rožaje, DN34, 25.9.1987, 1 ♂ , (HB, SI);

SERBIA:

EQ 2: Melnica, Petrovac, Požarevac, EQ41, 6.5.1986, 1 ♂ , (HB, SI); FQ 2: Vratna, Negotin, FQ01, 9.10.1986, 1 ♂ , (HB, SI); EP 3: r. Resava, Strmosten, Beljanica Mts., EP58, 7.10.1986, 2 ♂♂ , (HB, SI); r. Resava, Despotovac, Beljanica Mts., EP68, 7.10.1986, 1 ♂ , (HB, SI); FP 2: Radičevac, Knjaževac, FP12, 8.10.1986, 1 ♂ , 2 ♀♀, (HB, SI); Šarbanovac, Knjaževac, Stara Planina, FP12, 8.10.1986, 1 ♂ , 1 ♀, (HB, SI); Ošljane, Knjaževac, Stara Planina, FP13, 9.5.1986, 1 ♂ , (HB, SI), 8.10.1986, 2 ♂♂ , 1 ♀, (HB, SI); FN 3: Dojkinci, Pirot, Stara Planina, FN58, 13.6.1985, 6 ♂♂ , 1 ♀, (SI, ŠM); FN 2: r. Jerma, Klisura, Vlasina, FN12, 27.9.1987, 17 ♂♂ , 2 ♀♀, (HB, SI); Donja Ljubata, Bosilegrad, FN10, 26.9.1987, 1 ♂ , 1 ♀, (HB, SI); Gornja Ljubata, Bosilegrad, FN00, 26.9.1987, 1 ♂ , 1 ♀, (HB, SI); FM 1: Ribarci, Bosilegrad, FM29, 26.9.1987, 2 ♂♂ , 1 ♀, (HB, SI);

MACEDONIA:

DM 4: Mavrovo, DM70, 29.9.1987, 4 ♂♂ , 1 ♀, (HB, SI); Lešnica, Zdunje, Gostivar, DM82, 4.7.1989, 1 ♂ , 1 ♀, (HB, KB); EL 2: Brajčinska r., Brajčino, Pelister, EL12, 25.9.1988, 1 ♂ , (HB, SI); EL 3: Majden, Kavadarci, EL75, 23.9.1988, 2 ♂♂ , 2 ♀♀, (HB, SI); FL 1: Konska r., Konsko, Gevgelija, FL15, 31.5.1988, 1 ♂ , 3 ♀♀, (HB, KB); Sermenli r., Sermenin, Gevgelija, FL16, 31.5.1988, 1 ♂ , (HB, KB); FM 4: Cironska r., Avramci, Ratevo, FM50, 29.5.1988, 1 ♂ , (HB, KB); Zvegor, Delčevo, FM54, 28.5.1988, 1 ♂ , (HB, KB);

References:

WAGNER (1981, in litt.): SLOVENIA: VM 2: r. Sava, Mojstrana, Jesenice, VM24, 7.6.1979, 1 ♂ , leg. Zwick;

R e m a r k s: *Chelifera stigmatica* is a wide-spread and common species in Europe. In Yugoslavia it was found in 22 UTM squares of 50 x 50 km, in all Yugoslav republics (Fig. 12). Flight period in Yugoslavia: from May to October. Distribution: Finland, Great Britain, Belgium, Federal Republic of Germany, Spain, France, Italy, Czechoslovakia, Austria, Bulgaria, Greece (CHVALA & WAGNER 1989), Yugoslavia (WAGNER 1981), and Poland (NIESIOLOWSKI 1990).

Chelifera trapezina (Zetterstedt, 1838)

Material:

SLOVENIA:

UM 4: r. Soča, Žaga, UM83, 27.7.1989, 2 ♂♂ , 1 ♀, (HB, SI); VM 2: r. Zadnjica, Trenta, VM03, 3.10.1989, 1 ♂ , (HB, SI); r. Radovna, Radovna, VM23, 24.7.1989, 1 ♂ , 5 ♀♀, (HB), 23.8.1989, 4 ♂♂ , (HB, HJ); WM 1: r. Radoljna, Lovrenc na Pohorju, WM25, 11.9.1984, 1 ♂ , (SI); WM 2: Jurgovo, Oplotnica, Pohorje, WM24, 11.9.1984, 2 ♂♂ , (SI);

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CROATIA:

YL 2: Velika, Slavonska Požega, YL03, 7.7.1989, 1 ♂ , 3 ♀♀, (HB, KB);

BOSNIA AND HERZEGOVINA:

BP 4: Obrnja, Kalinovik, BP80, 15.9.1987, 4 ♂♂ , 5 ♀♀, (HB, SI); CN 1: r. Sutjeska, Grab, CN09, 17.9.1987, 7 ♂♂ , 8 ♀♀, (HB, SI);

MONTENEGRO:

CN 1: r. Zukva, Šavnik, CN45, 20.9.1987, 1 ♂ , 4 ♀♀, (HB, SI); CN 3: r. Somina, Somina, Šavnik, CN65, 20.9.1987, 10 ♂♂ , 10 ♀♀, (HB, SI); CN 4: r. Tara, Podbišče, Mojkovac, CN84, 21.9.1987, 1 ♂ , (HB, SI); Mušovića Rijeka, Kolašin, CN84, 21.9.1987, 1 ♂ , 3 ♀♀, (HB, SI); Gnjili Potok, Andrijevica, CN93, 24.9.1987, 3 ♂♂ , 3 ♀♀, (HB, SI); DN 2: r. Zlorečica, Kruška, Andrijevica, DN01, 24.9. 1987, 1 ♂ , (HB, SI); r. Zlorečica, Kuti, Andrijevica, DN01, 24.9. 1987, 13 ♂♂ , 12 ♀♀, (HB, SI);

SERBIA:

EP 3: r. Resava, Strmosten, Beljanica Mts., EP58, 7.10.1986, 2 ♂♂ , 5 ♀♀, (HB, SI); FN 3: Jelovica, Pirot, Stara Planina, FN68, 18.9. 1985, 1 ♂ , (HB, SI); Dojkinci, Pirot, Stara Planina, FN58, 17.9. 1985, 3 ♂♂ , 2 ♀♀, (HB, SI); FN 2: r. Jerma, Klisura, Vlasina, FN12, 27.9.1987, 4 ♂♂ , 3 ♀♀, (HB, SI); Promaja, Vlasina Surdulica, FN02, 27.9.1987, 2 ♂♂ , 2 ♀♀, (HB, SI); Gornja Ljubata, Bosilegrad, FN00, 26.9.1987, 7 ♂♂ , 2 ♀♀, (HB, SI);

MACEDONIA:

FM 1: Ruen, Kriva Palanka, FM26, 15.9.1985, 1 ♂ , 3 ♀♀, (HB, SI);

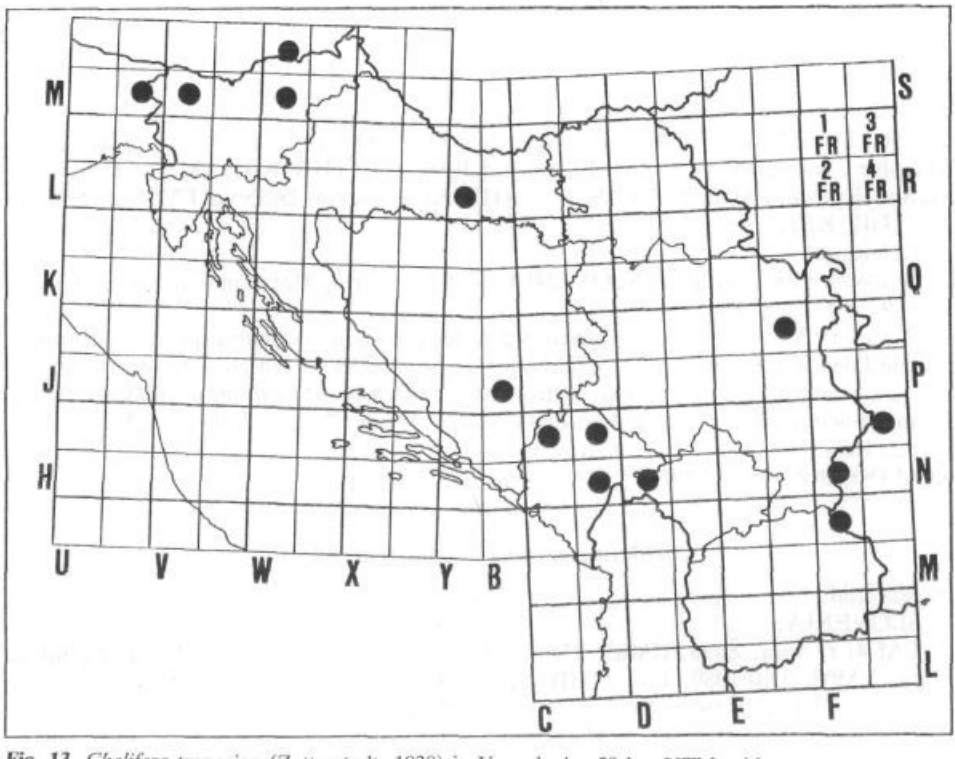

Fig. 13. *Chelifera trapezina* (Zetterstedt, 1838) in Yugoslavia: 50 km UTM grid.
Sl. 13. *Chelifera trapezina* (Zetterstedt, 1838) v Jugoslaviji: UTM mreža 50 × 50 km.

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R e m a r k s: *Chelifera trapezina* is a widely distributed, very common species throughout Europe. It was found all over Yugoslavia (Fig. 13). Flight period in Yugoslavia: the adults were collected from July to October. Distribution: Norway, Sweden, Finland, Ireland, Great Britain, Belgium, Federal Republic of Germany, German Democratic Republic, Poland, Czechoslovakia, Austria, Spain, France, Switzerland, Soviet Union: North European territory, Roumania, Yugoslavia (CHVALA & WAGNER 1989).

Chelifera wagneri Horvat, 1990

References:

HORVAT (1990, in litt.): MACEDONIA: EM 2: Gorno Begovo, Begovo Polje, Jakupica Mts., 1960 m a.s.l., EM32, 26.-28.6.1989, 20 ♂♂ , 10 ♀♀ (type material), leg. Horvat & Kryštufek;

R e m a r k s: *Chelifera wagneri* is known only from the type locality in Macedonia (Yugoslavia, Fig. 14). It was collected together with its closest relative *Chelifera precabunda* Collin, 1961. Flight time: June.

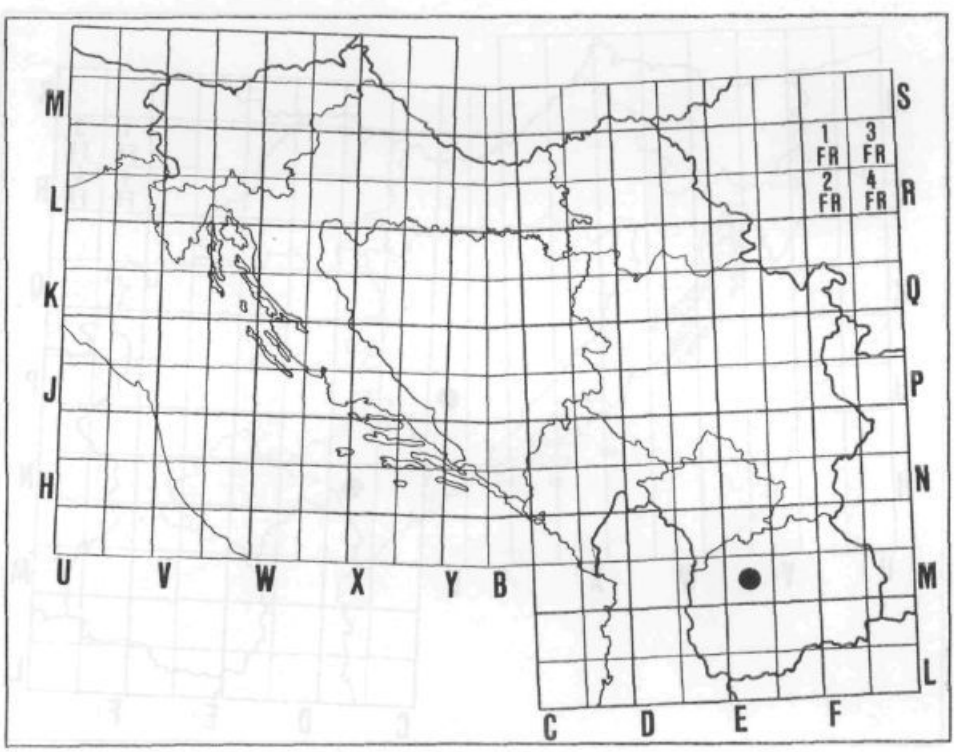

Fig. 14. *Chelifera wagneri* Horvat, 1990 in Yugoslavia: 50 km UTM grid.
Sl. 14. *Chelifera wagneri* Horvat, 1990 v Jugoslaviji: UTM mreža 50 × 50 km.

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4.2. Genus *Chelipoda* Macquart, 1823

Chelipoda vocatoria (Fallén, 1816)

Material:
BOSNIA AND HERZEGOVINA:
BP 4: Rogoj, Dobro Polje, BP92, 15.9.1987, 1 ♂ , (HB, SI);
MONTENEGRO:
CN 4: r. Tara, Skrbuša, Kolašin, CN83, 21.9.1987, 1 ♂ , 1 ♀, (HB, SI);

R e m a r k s: *Chelipoda vocatoria* is first recorded for the Yugoslav fauna. Flight time in Yugoslavia: September. It is a wide-spread species in the Palearctic and Nearctic regions. Distribution: Sweden, Finland, Great Britain, Federal Republic of Germany, German Democratic Republic, Poland, Czechoslovakia, France, Austria, Soviet Union: Georgian SSR, Nearctic Region (CHVALA & WAGNER 1989), and Yugoslavia (Fig. 15).

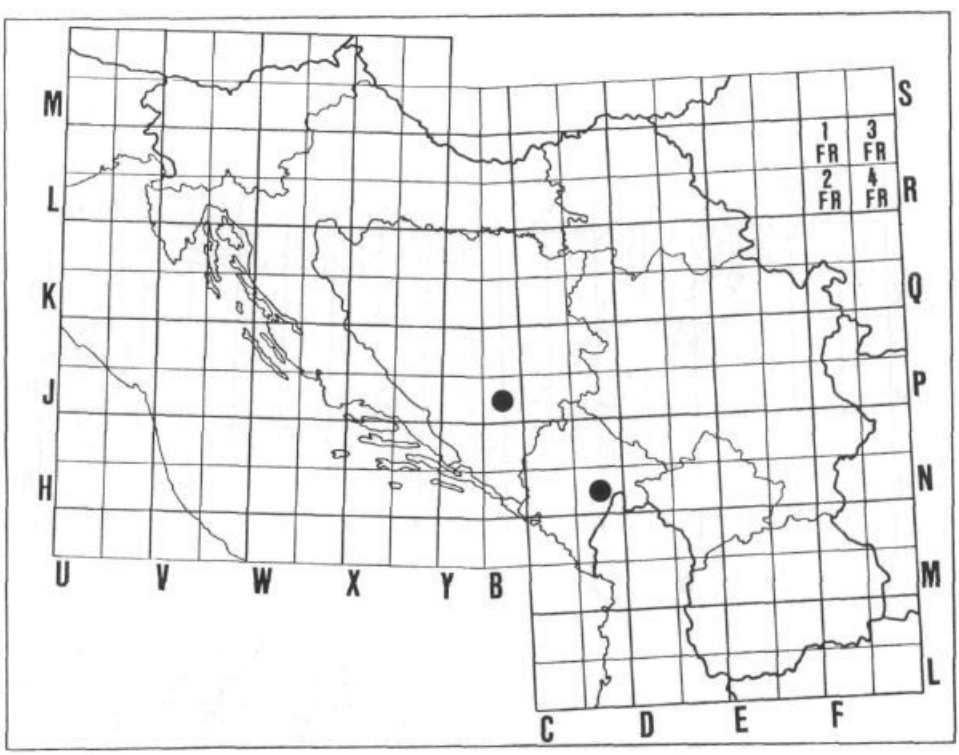

Fig. 15. *Chelipoda vocatoria* (Fallén, 1816) in Yugoslavia: 50 km UTM grid.
Sl. 15. *Chelipoda vocatoria* (Fallén, 1816) v Jugoslaviji: UTM mreža 50 × 50 km.

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4.3. Genus *Hemerodromia* Meigen, 1822

Hemerodromia melangyna Collin, 1927

Material:
CROATIA:
VL 2: r. Bračana, Abramci, Buzet, VL13, 21.5.1986, 1 ♂ , (HB, KC, SI); WK 3: r. Korana, Plitvička Jezera, WK57, 13.9.1987, 1 ♂ , (HB, SI);

R e m a r k s: *Hemerodromia melangyna* is new to the fauna of Yugoslavia. The adults were collected in May and September. This uncommon species is known in Great Britain, France, Czechoslovakia (CHVALA & WAGNER 1989), and Yugoslavia (Fig. 16).

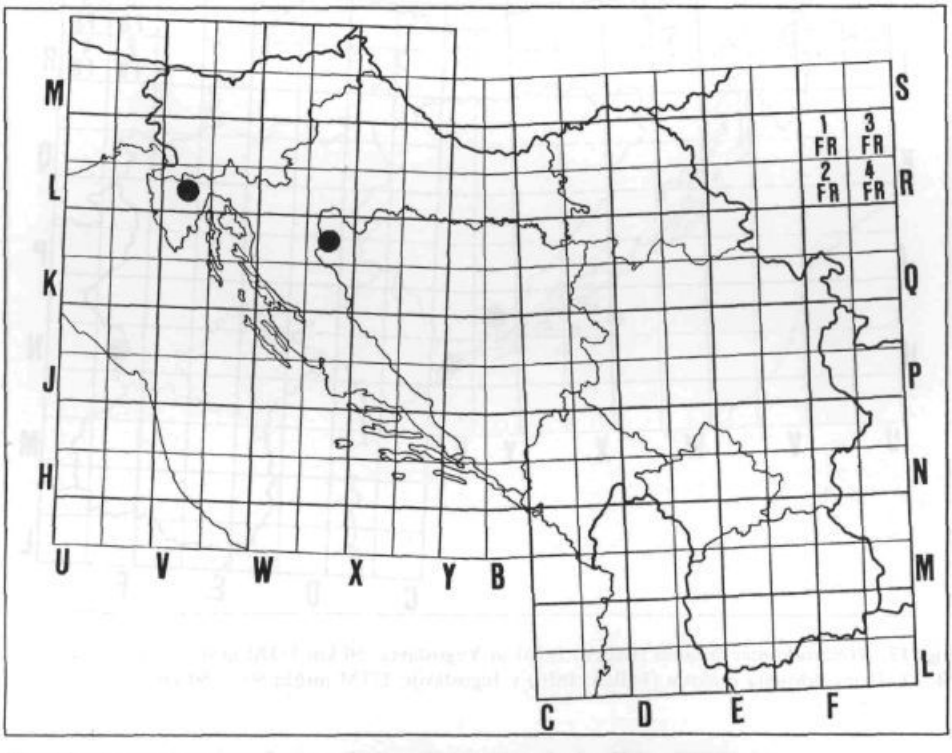

Fig. 16. *Hemerodromia melangyna* Collin. 1927 in Yugoslavia: 50 km UTM grid.
Sl. 16. *Hemerodromia melangyna* Collin, 1927 v Jugoslaviji: UTM mreža 50 × 50 km.

Hemerodromia oratoria (Fallén, 1816)

Material:
CROATIA:
BN 4: r. Ljuta, Konavovski Dvori, BN81, 18.9.1987, 7 ♂♂ , 2 ♀♀, (HB, SI);
BOSNIA AND HERZEGOVINA:
YH 1: r. Studenčica, D. Studenci, Čapljina, YH18, 14.9.1987, 2 ♂♂ , 3 ♀♀, (HB, SI); Proboj, Čapljina, YH08, 14.9.1987, 7 ♂♂ , 4 ♀♀, (HB, SI);

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SERBIA:

FN 2: r. Jerma, Klisura, Vlasina, FN12, 27.9.1987, 1 ♂ , (HB, SI);

R e m a r k s: *Hemerodromia oratoria* is first recorded for the Yugoslav fauna. Flight time in Yugoslavia: September. In Europe it is a wide-spread species. Distribution: Sweden, Finland, Great Britain, Federal Republic of Germany, France, Czechoslovakia, Austria, Hungary, Roumania, Soviet Union: Far East, China (CHVALA & WAGNER 1989), Poland (NIESIOLOWSKI 1990), and Yugoslavia (Fig. 17).

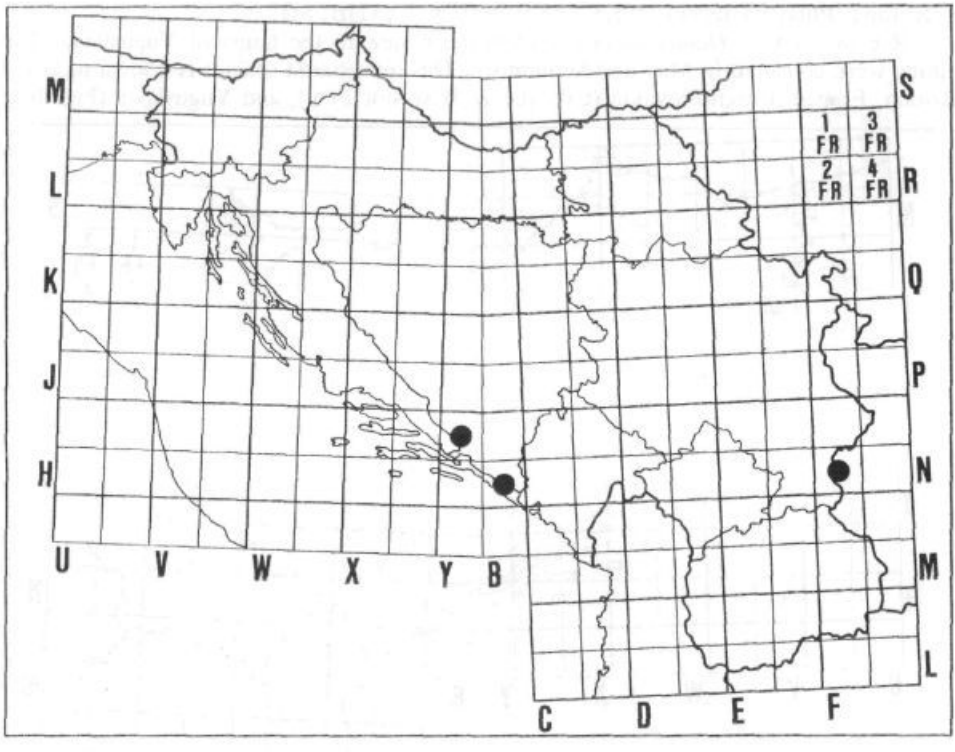

Fig. 17. *Hemerodromia oratoria* (Fallén, 1816) in Yugoslavia: 50 km UTM grid.
Sl. 17. *Hemerodromia oratoria* (Fallén, 1816) v Jugoslaviji: UTM mreža 50 × 50 km.

Hemerodromia slovenica Horvat & Wagner, 1990

Material:

SLOVENIA:

VL 1: r. Horjulščica, Horjul, VL49, 25.5.1986, 2 ♂♂ , 1 ♀, (HI, HB); r. Unec, Planina, Postojna, VL47, 1.7.1986, 2 ♂♂ , 1 ♀, (HI, HB);

References:

HORVAT & WAGNER (1990, in litt.): SLOVENIA: VL 1: r. Unec, Planina, Postojna, VL47, 25.5.1986, 2 ♂♂ , 3 ♀♀ (type material), 1.7.1986, 7 ♂♂ , 3 ♀♀ (type material), leg. Hočevar & Horvat;

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R e m a r k s: *Hemerodromia slovenica* is a rare species. It is known only from two localities in Slovenia (Yugoslavia, Fig. 18). The adults were collected in May and July.

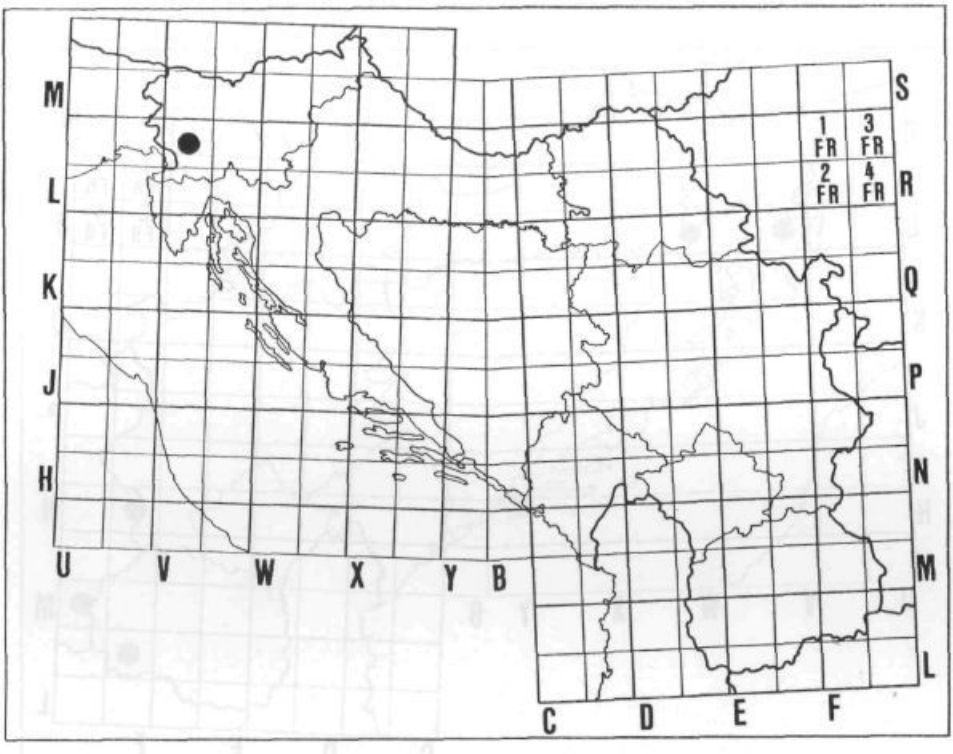

Fig. 18. *Hemerodromia slovenica* Horvat & Wagner, 1990 in Yugoslavia: 50 km UTM grid.
Sl. 18. *Hemerodromia slovenica* Horvat & Wagner, 1990 v Jugoslaviji: UTM mreža 50 × 50 km.

Hemerodromia unilineata Zetterstedt, 1842

Material:
CROATIA:
VL 2: r. Bračana, Abramci, Buzet, VL13, 21.5.1986, 25 ♂♂, 28 ♀♀, (HB, KC, SI); r. Bračana, Osoje, Buzet, VL12, 21.5.1986, 8 ♂♂, 2 ♀♀, (HB, KC, SI); WL 2: r. Dobra, Vrbovsko, WL02, 12.9.1987, 1 ♂, (HB, SI);
SERBIA:
FN 2: Gornja Ljubata, Bosilegrad, FN00, 26.9.1987, 1 ♂, 1 ♀, (HB, SI);
MACEDONIA:
FL 1: Konska r., Konsko, Gevgelija, FL15, 31.5.1988, 2 ♂♂, 1 ♀, (HB, KB); FM 4: Ratevska r., Ratevo, Berovo, FM51, 29.5.1988, 1 ♂, (HB, KB); r. Želevica, Želevica, Istevnik, FM53, 28.5.1988, 11 ♂♂, 6 ♀♀, (HB, KB);

R e m a r k s: *Hemerodromia unilineata* is a widely distributed species throughout Europe. It is recorded for Sweden, Great Britain, Belgium, Federal Republic of Germany,

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German Democratic Republic, Spain, France, Czechoslovakia, Austria, Hungary, Roumania, Greece, Yugoslavia (CHVALA & WAGNER 1989), and Poland (NIESIOLOWSKI 1990). In Yugoslavia (Fig. 19) the adults were collected in May and September.

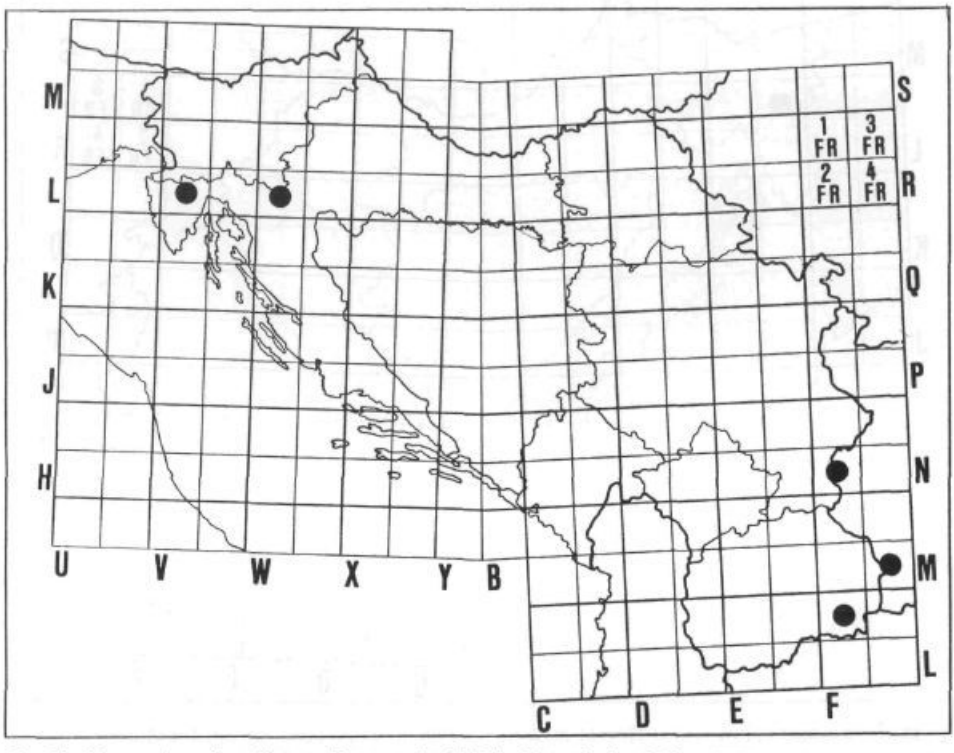

Fig. 19. *Hemerodromia unilineata* Zetterstedt, 1842 in Yugoslavia: 50 km UTM grid.
Sl. 19. *Hemerodromia unilineata* Zetterstedt, 1842 v Jugoslaviji: UTM mreža 50 × 50 km.

4.4. Genus *Phyllodromia* Zetterstedt, 1837

Phyllodromia melanocephala (Fabricius, 1794)

Material:
SLOVENIA:
VL 3: Zlati Rep, Ortnek, VL77, 28.7.1989, 5 ♂♂ , 9 ♀♀, (HB, SI);
SERBIA:
FN 3: Dojkinci, Pirot, Stara Planina, FN58, 13.6.1985, 1 ♂ , 1 ♀, (SI, ŠM);
R e m a r k s: *Phyllodromia melanocephala* is first recorded for the Yugoslav fauna. Flight period in Yugoslavia: June and July. Distribution: Sweden, Finland, Great Britain, Belgium, Denmark, Federal Republic of Germany, German Democratic Republic, Czechoslovakia, Poland, France, Italy, Austria, Soviet Union: North European territory, Latvian SSR, Estonian SSR (CHVALA & WAGNER 1989), and Yugoslavia (Fig. 20).

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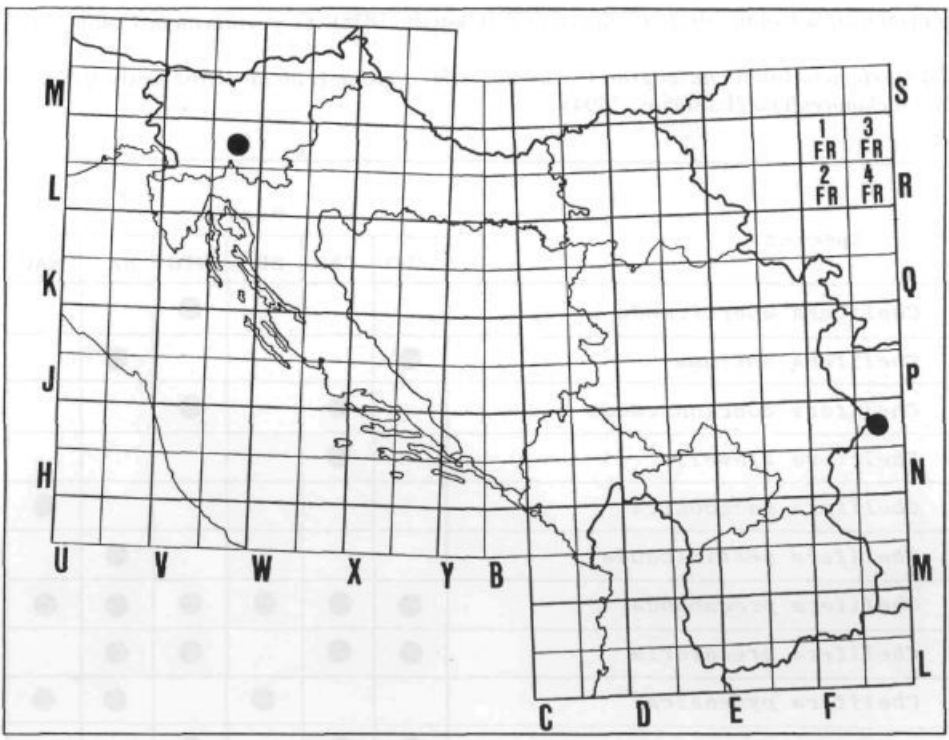

Fig. 20. *Phyllodromia melanocephala* (Fabricius, 1794) in Yugoslavia: 50 km UTM grid.
Sl. 20. *Phyllodromia melanocephala* (Fabricius, 1794) v Jugoslaviji: UTM mreža 50 × 50 km.

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SUMMARY

The present paper deals with 155 records of 19 Hemerodromiinae species (Diptera: Empididae) from Yugoslavia. Shown in Table 1 is the presence of species in the Yugoslav republics.

8 species were recorded for Slovenia, 10 for Croatia, 6 for Bosnia and Herzegovina, 8 for Montenegro, 10 for Serbia, and 7 for Macedonia. Eleven species are new to the fauna of Yugoslavia: *Chelifera aperticauda* Collin, 1927, *C. astigma* Collin, 1927, *C.*

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concinnicauda Collin, 1927, *C. flavella* (Zetterstedt, 1838), *C. pectinicauda* Collin, 1927, *C. precabunda* Collin, 1961, *C. pyrenaica* Vaillant, 1981, *Chelipoda vocatoria* (Fallén, 1816), *Hemerodromia melangyna* Collin, 1927, *H. oratoria* (Fallén, 1816), and *Phyllodromia melanocephala* (Fabricius, 1794).

Species:	Region:					
	SLO	CRO	BH	MTG	SB	MAC
Chelifera aperticauda				●		
Chelifera astigma	●				●	
Chelifera concinnicauda		●		●		
Chelifera flavella		●				
Chelifera macedonica						●
Chelifera pectinicauda					●	
Chelifera precabunda	●	●	●	●	●	●
Chelifera precatoria	●	●		●	●	
Chelifera pyrenaica			●		●	●
Chelifera siveci	●	●		●		
Chelifera stigmatica	●	●	●	●	●	●
Chelifera trapezina	●	●	●	●	●	●
Chelifera wagneri						●
Chelipoda vocatoria			●	●		
Hemerodromia melangyna		●				
Hemerodromia oratoria		●	●		●	
Hemerodromia slovenica	●					
Hemerodromia unilineata		●			●	●
Phyllodromia melanocephala	●				●	
Number of species:	8	10	6	8	10	7

Table 1. Presence of the Hemerodromiinae species (black circles) in the Yugoslav republics.
Tabela 1. Prisotnost vrst iz poddružine Hemerodromiinae (temni krogi) v jugoslovanskih republikah.

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POVZETEK

Pričujoči članek obravnava 155 podatkov o 19 vrstah iz poddružine Hemerodromiinae (Diptera: Empididae) v Jugoslaviji. V tabeli 1 je prikazana njihova prisotnost v jugoslovanskih republikah.

Za Slovenijo navajam 8 vrst, za Hrvatsko 10, za Bosno in Hercegovino 6, za Črno Goro 8, za Srbijo 10 in za Makedonijo 7 vrst. Enajst vrst je novih za favno Jugoslavije: *Chelifera aperticauda* Collin, 1927, *C. astigma* Collin, 1927, *C. concinnicauda* Collin, 1927, *C. flavella* (Zetterstedt, 1838), *C. pectinicauda* Collin, *C. precabunda* Collin, 1961, *C. pyrenaica* Vaillant, 1981, *Chelipoda vocatoria* (Fallén, 1816), *Hemerodromia melangyna* Collin, 1927, *H. oratoria* (Fallén, 1816) in *Phyllodromia melanocephala* (Fabricius, 1794).

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