

ODONATA FAUNA OF THE AREA OF THE SECOND SERIES OF LOCKS ON THE TISZA

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Abstract

Since 1966 the author has been carrying out entomological researches in the inundation area of the Tisza between Tiszabábolna and Kisköre. Up till 1973, besides the Dipterae primarily the Odonata fauna was collected. The present paper attempts to provide a picture of the fauna of this area by means of processing and evaluating 3800 dragonfly specimens collected during the 8 years. The 41 species detected represent 68% of the Hungarian fauna. However, if the species from the hilly and mountain districts are disregarded, then this value changes to about 86%.

Introduction

The Odonata fauna in Hungary can be said to be comparatively well explored, but nevertheless, from an odonatological aspect, some white spots can still be found, primarily on the Great Hungarian Plain. This is very clearly shown by maps illustrating the extents of Hungarian dragonfly species (STEINMANN 1959). The present paper reports the results of investigations in such a less well-studied area, the area of the second series of locks in a small part of the central reaches of the Tisza.

Very little work has been done on the Odonata fauna of the Tisza valley. Only scattered data are to be found in a few publications (ZILÁHI-S 1961, STEINMANN 1962, TÓTH 1972). To the best knowledge of the author, there is only one work dealing exclusively with the fauna of this area (TÓTH 1966). This latter reports data from the areas of Vásárosnamény, Tokaj, Tiszapalkonya, Oszlár, Tiszatarján and Szeged.

Examination of the literature data available revealed data only from Tiszafüred (13 species) and Tiszaderzs (1 species!). Accordingly, in the period from 1966 to 1973 the Odonata material collected provides almost entirely new data on the dragonfly fauna from this area. The region examined, from Kisköre to Tiszabábolna, but predominantly between Kisköre and Tiszafüred, is not a large one relatively, but it contains a very large number of aquatic biotopes, and therefore its Odonata fauna is richer than the average.

The number of Odonata species detected in Hungary is exactly 60. Of these, 10—12 live exclusively in hilly and mountain districts. If this is taken into consideration, then it can be stated that the 41 species discovered so far in this area roughly represent the entire fauna of the second series of locks on the Tisza.

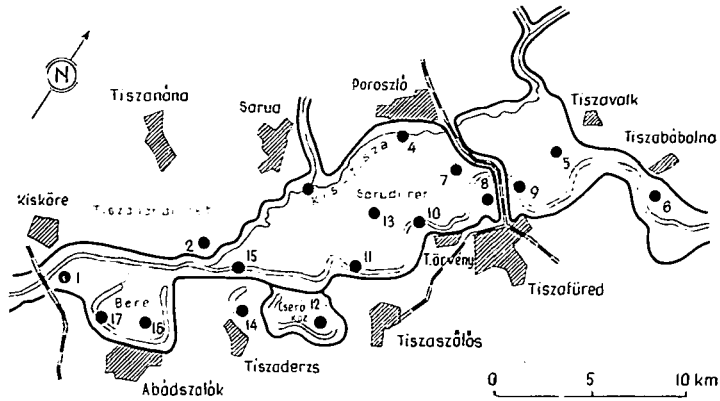


Fig. 1. Area of second series of locks on the Tisza, showing the more important collecting sites.

The black circles on the sketch map of the area indicate the more important collecting sites. The majority of these areas 1—2 km in diameter. Further detail would perhaps not be justified, since the majority of the dragonflies are fairly mobile. It would also be fairly difficult to denominate the individual points more precisely. Since the sketch map does not give the names of all of the collecting sites, these are listed separately here:

1. Tisza inundation area at Kisköre
2. Meadow at Tiszanána
3. Kis-Tisza at Sarud
4. Kis-Tisza at Poroszló
5. Tisza inundation area at Tiszavalk
6. Tisza inundation area at Tiszabábolna
7. Tisza inundation area at Tiszafüred
8. Dead-Tisza at Tiszafüred
9. Tisza at Tiszafüred
10. Tisza inundation area at Tiszaörvény
11. Tisza at Tiszaszőlős
12. Cserőköz
13. Meadow at Sarud
14. Dead-arm ("Canal") at Tiszaderzs
15. Tisza at Tiszaderzs
16. Bere
17. Dead-Tisza at Abádszalók

The limited extent of this publication does not permit a detailed account of the faunistic data relating to the large amount of material. The collection times, divided up into 10-day periods, are shown simply in one Table. From this a good picture can be obtained for some the species as regards the times of swarming too.

Dominance relations

Very little research has been carried out into the quantitative dominance relations involving the Odonatae in Hungary. Only a few part-results have been obtained in this field.

In the course of the collections, 3800 Odonata specimens were caught and

determined. The total number of samples is distributed very unevenly among the individual species. Accordingly, it appeared advisable to deal with the dominance relations. The data refer overall to the entire collecting season. Examination of the individual months would clearly show a different picture. *Ischnura elegans elegans* Van der Linden, for example, which comprises 30% of the material, is no longer the predominant species in the autumn months, although it can still be caught in lower numbers in September.

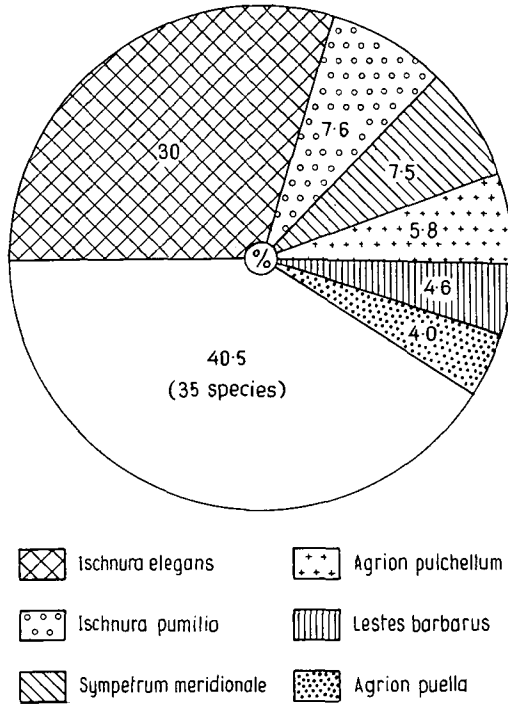


Fig. 2. Dominance relations of most frequent species.

The 6 species each comprising more than 3% of the material are depicted on the circular diagram of Fig. 2. The residual 40.5% is distributed among the other 35 species. The proportions of 15 of these are above 1%. The rarest species, making up only 0.1% of the material, are *Anax imperator imperator* LEACH, *Anax parthenope parthenope* SELYS, and *Lencorrhinia pectoralis* CHARP. Of course, this does not mean that these are necessarily the most rarely occurring species in this area. It must be remembered that these animals are excellent fliers, and extremely difficult to catch.

In recent years the Odonata fauna of the Dead-Tisza at Oszlár was also processed (TÓTH 1972), and thus there is a possibility for the comparison of the faunas of the area of the second lock-series on the Tisza and the Dead-Tisza at Oszlár. Taking into consideration that this area is substantially smaller, but possesses similar features (Dead-Tisza, at Oszlár, sand-pits, Hejő, brook, living Tisza), the similarity is considerable. Nevertheless, there are some differences, mainly as regards the dominance relations, for which it is difficult to find a satisfactory answer. This

Table 1. Some of the more important data relating to the Odonata

No.	Species	Months								
		V.			VI.			VII.		
		10-day period								
		2.	3.	1.	2.	3.	1.	2.	3.	
1.	<i>Platycnemis p. pennipes</i> PALLAS	■	○	□	■	□	□		□	
2.	<i>Agrion (Coenagrion) ornatum</i> SELYS	□		□	□	□		□	□	
3.	<i>Agrion (Coenagrion) p. puella</i> LINNÉ	□	■	□			○	□	□	
4.	<i>Agrion (C) p. pulchellum</i> VAN DER L.		○		□	□	□	□	□	
5.	<i>Pyrhosoma nymphula</i> SULZER				□	□				
6.	<i>Erythromma viridulum</i> CHARPENTIER				□	□	□			
7.	<i>Ischnura e. elegans</i> VAN DER LINDEN	○	■	□	□	□	□	■	□	
8.	<i>Ischnura pumilio</i> CHARPENTIER	○	■	□	□	□			□	
9.	<i>Enallagma c. cyathigerum</i> CHARPENTIER		□	□			■	□	□	
10.	<i>Sympetna fusca</i> VAN DER LINDEN	□	■	□	□	□	□	□	□	
11.	<i>Lestes barbarus</i> FABRICIUS	○			□	□	□	□	□	
12.	<i>Lestes dryas</i> KIRBY					□	□	□		
13.	<i>Lestes macrostigma</i> EVERSMAHNN				□	□			□	
14.	<i>Lestes sponsa sponsa</i> HANSEMANN		○			□				
15.	<i>Lestes virens vestalis</i> RAMBUR					□		□	□	
16.	<i>Lestes v. viridis</i> VAN DER LINDEN					□		□	□	
17.	<i>Calopteryx (Agrion) s. splendens</i> HARR.	○	○	□	□		□	□	□	
18.	<i>Gomphus v. vulgatissimus</i> LINNÉ		○			□				
19.	<i>Gomphus flavipes</i> CHARPENTIER		○	■	□	□		□		
20.	<i>Brachytron hafniense</i> MÜLLER		□	□	□	□			□	
21.	<i>Aeschna affinis</i> VAN DER LINDEN		○		□	□		□		
22.	<i>Aeschna mixta</i> LATREILLE		○							
23.	<i>Anaciaeschna i. isosceles</i> MÜLLER		□	□	□					
24.	<i>Anax imperator imperator</i> LEACH						□	□		
25.	<i>Anax parthenope parthenope</i> SELYS	○		□						
26.	<i>Cordulia aenea aenea</i> LINNÉ	□	□				□			
27.	<i>Somatochlora flavomaculata</i> VAN DER L.		□	□	□			□		
28.	<i>Libellula depressa</i> LINNÉ	○	□	□			■	□		
29.	<i>Libellula fulva fulva</i> MÜLLER	○	□	□		□	□			
30.	<i>Libellula q. quadrimaculata</i> LINNÉ	■	□		■	□	□	□		
31.	<i>Orthetrum b. brunneum</i> FONSCOLOMBE			□	■					
32.	<i>Orthetrum c. cancellatum</i> LINNÉ					□	□	□		
33.	<i>Orthetrum c. coerulescens</i> FABIRCIUS		○	□	■		□	□		
34.	<i>Crocothemis e. erythraea</i> BRULLÉ									
35.	<i>Sympetrum depressiusculum</i> SELYS							□	□	
36.	<i>Sympetrum f. flaveolum</i> LINNÉ		○	○			□	□	□	
37.	<i>Sympetrum meridionale</i> SELYS	○	○					□	□	
38.	<i>Sympetrum s. sanguineum</i> MÜLLER		○					□		
39.	<i>Sympetrum s. striolatum</i> CHARPENTIER							□		
40.	<i>Sympetrum vulgatum vulgatum</i> LINNÉ		○						□	
41.	<i>Leucorrhinia pectoralis</i> CHARPENTIER				□					

Explanation of symbols
 □ = imago
 ○ = larva
 ■ = imago + larva
 ET = Bank of Living Tisza
 HK = Dead-arms, sand-pits
 KT = Kis-Tisza
 KV = Smaller water courses, ditches
 RL = Meadow, pasture
 L = Grove-wood

species collected in the area of the second series of locks on the Tisza

Months									Proportion, %	Conditions of occurrence in more important biotopes
VIII.			IX.			X.				
of month										
1.	2.	3.	1.	2.	3.	1.	2.	3.		
		□	□	□					2,9	HK KT KV L
									0,6	HK KT KV RL L
□									4,0	HK KV RL
□		□							5,8	HK KT KV RL L
									0,2	KV
									0,9	HK L
□	□	□	□		○				30,0	ÉT HK KT KV RL L
□	□			□		○			7,6	ÉT HK KT KV RL L
			□	□		○			2,7	HK KT KV RL
□	□	□	□	□	□	□	□	□	2,0	ÉT HK KT KV RL L
			□	□	□				4,6	ÉT HK KT KV RL L
□	□								0,9	HK KT RL L
									0,2	HK RL
	□	□	□						1,3	ÉT HK KT KV RL L
		□	□						2,0	ÉT HK KT KV RL L
		□	□						0,2	HK KV
		□	□						2,9	ÉT HK KT KV RL L
									0,6	ÉT HK KV
									0,7	ÉT
		□							1,0	HK KT KV
	□	■	□						1,2	ÉT HK KT L
									0,5	HK L
									0,6	HK KT
									0,1	HK
									0,1	HK
									0,5	ÉT HK KT KV L
									0,6	HK
									2,3	ÉT HK KT KV RL L
									0,6	HK KT KV
									1,3	ÉT HK KT KV L
	□	□	□						0,8	ÉT HK RL
									1,0	ÉT HK KT KV RL L
									1,3	ÉT HK KT KV RL L
			□	□	□				0,5	HK RL L
			□	□	□				1,2	ÉT HK L
	□	□	□	□	□	■			2,5	ÉT HK KT KV RL L
	□	□	□	□	□				7,5	ÉT HK KT KV RL L
	□	□	□	□	□				2,9	ÉT HK KT KV RL L
									1,7	HK KT KV L
									1,6	ÉT HK KT KV RL L
									0,1	HK

would require a systematic and intensive examinations of the group of problems. 39 species were found in the Dead-Tisza area at Oszlár. (Unfortunately, for technical reasons the *Calopteryx splendens splendens* HARRIS data were omitted from the listing in the above paper, but they do appear in the quantitative evaluation.)

Second lock-series on Tisza	%	Dead-Tisza at Oszlár	%
<i>Ischnura elegans</i>	30	<i>Agrion pulchellum</i>	16.2
<i>Ischnura pumilio</i>	7.6	<i>Ischnura elegans</i>	12.5
<i>Sympetrum meridionale</i>	7.5	<i>Agrion puella</i>	7.6
<i>Agrion pulchellum</i>	5.8	<i>Sympecna fusca</i>	7.2
<i>Lestes barbarus</i>	4.6	<i>Platycnemis pennipes</i>	6.1
<i>Agrion puella</i>	4	<i>Calopteryx splendens</i>	5.8

Note: The larvae do not appear in the numerical data referring to the Dead-Tisza at Oszlár, but this does not affect the dominance relations essentially.

It is interesting that *Agrion p. pulchellum* Van der Linden, which occurs in first place in the data for the Dead-Tisza at Oszlár, is only in fourth place for the area of the second lock-series on the Tisza. To a certain extent this may perhaps be explained in that the larva of this species favours slow-running brooks and streams (although it also develops in high numbers in standing waters too). The Odonata fauna from the Dead-Tisza at Oszlár are subject to the strong influence of the richly vegetated Hejő brook, which runs slowly past only a few metres away. Of course, this is only an assumption, and there may well be some other explanation.

The percentage frequency data for all of the species are given in Table 1.

Detailed account of the species

A list is given below of the species detected in the area of the second series of locks on the Tisza, taking into account the most recently accepted taxonomic classification. A brief reference is made to the Hungarian extents of the species and to the conditions of their occurrence in the examined area, and the more important habitats are indicated.

1. *Platycnemis pennipes pennipes* PALLAS: frequent throughout the country, and common in places. Also frequent in this area of the Tisza, while its larvae were found too from slowly running water (ditches emptying into the Kis-Tisza at Sarud): Abádszalók, Dead-Tisza, Cserőköz, Kis-Tisza, Tiszafüred, Tiszavalk.

2. *Agrion (Coenagrion) ornatum* SELYS: Predominantly found in hilly and mountain districts in Hungary. It is sporadic in this area of the Tisza, and is generally only found individually: Sarud, Kis-Tisza, Poroszló, Kis-Tisza, Tiszafüred.

3. *Agrion (Coenagrion) puella puella* LINNÉ: Frequent throughout the country, and in this area of the Tisza too. It can mainly be collected along the dead-arms and the sand-pits: Cserőköz, Kisköre, Tiszaderzs, Tiszafüred, Dead-Tisza.

4. *Agrion (Coenagrion) pulchellum pulchellum* VAN DER LINDEN: Common throughout the country along slow-running brooks, brooklets and standing waters, and found in every habitat in this area of the Tisza.

5. *Pyrhosoma nymphula* SULZER: Known in only relatively few places in Hungary, mainly in hilly districts. 10—15 years ago it was considered very rare, but in intensive research it was found not only in many places in the hilly districts, but also on the plains. In spite of this, it can still not be said to be frequent, although in some habitats it can be collected in large numbers. Its occurrence in this area of the Tisza is an interesting datum with regard to the extent of this species. 5 specimens were found in small water-courses emptying into the Kis-Tisza near Sarud.

6. *Erythromma viridulum* CHARPENTIER: Frequent in Hungary, being found mainly along swamps and bogs, and smaller lakes. It is found in low numbers in this area of the Tisza, primarily beside sand-pits: Cserököz, Kisköre, Tiszabábolna.

7. *Ischnura elegans elegans* VAN DER LINDEN: Common throughout Hungary. Found in the highest proportion (30%) in almost every habitat in this area of the Tisza. It was also detected by STEINMANN (1962) at Tiszafüred. Its orange-coloured female too can be found in appreciable numbers in the area.

8. *Ischnura pumilio* CHARPENTIER: Common throughout the country along slow-running brooklets, brooks and standing waters. Frequent in this area of the Tisza, and in places (e.g. the Dead-Tisza at Tiszafüred) can be caught in masses. Its larvae too were located in large numbers in the Dead-Tisza at Tiszafüred. STEINMANN (1962) too detected it at Tiszafüred. Its orange-coloured females are also frequent.

9. *Enallagma cyathigerum cyathigerum* CHARPENTIER: Frequent throughout the country, and in this area of the Tisza too: Bere, Cserököz, Poroszló, Kis-Tisza, meadow at Sarud, Tiszabábolna, Tiszafüred, Tiszavalk. Also detected by SPEINMANN (1962) at Tiszafüred.

10. *Sympecna fusca* VAN DER LINDEN: Frequent throughout the country, and common in places. It is the only Hungarian dragonfly species hibernating in the imago form, and thus it can be collected from early spring until late autumn. Frequent in this area of the Tisza too. It can regularly be found in dry biotopes too, relatively far from the water: Bere, Cserököz, Kisköre, meadow at Sarud, Tiszaderzs, Tiszafüred, Tiszaörvény, Tiszavalk. It is also reported by STEINMANN (1962) from Tiszafüred.

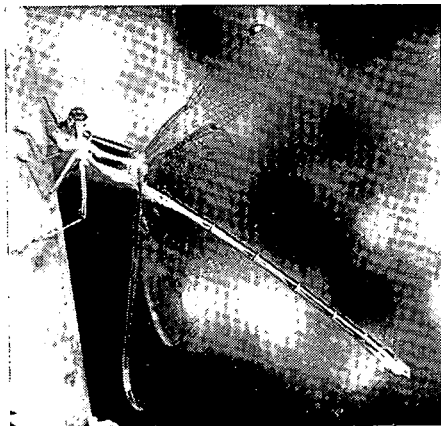


Fig. 3. *Lstes barbarus* FABR.



Fig. 4. Characteristic Odonata biotope (dead-arm detail) in the Tisza inundation area on the outskirts of Abádszalók

11. *Lestes barbarus* FABRICIUS: Common everywhere in Hungary. Many larvae were found in dead-arms and sand-pits in this area of the Tisza. The imagos were often observed en masse on the sunny edges of woods, and in places with bushy, clumpy high-stalked vegetation: Bere, Cserőköz, meadow at Sarud, Tiszafüred, Tiszaörvény, Tiszavalk.

12. *Lestes dryas* KIRBY: Frequent throughout the country along standing waters and marshy meadows. It can be caught sporadically in this area of the Tisza: Cserőköz, meadow at Sarud, Tiszafüred, Dead-Tisza. It is also reported by STEINMANN (1962) from Tiszafüred.

13. *Lestes macrostigma* EVERS-MANN: Can be found in Hungary, mainly on the Great Hungarian Plain, in places in large numbers. It can be collected rarely in this area of the Tisza, but its larvae were not found here: Tiszafüred, Tiszavalk.

14. *Lestes sponsa sponsa* HANSEMANN: Frequent in Hungary, mainly along standing waters and marshes in flat country. It occurs throughout this entire area, and appears frequent mainly in the Dead-Tisza area at Tiszafüred.

15. *Lestes virens vestalis* RAMBUR: Occurs throughout the country along standing waters and marshy meadows. It is frequent mainly in flat country, and appears in masses in places. It can be found throughout this entire area of the Tisza, and is frequent mainly at Cserőköz. This is the only species which, apart Tiszafüred, is mentioned in the literature from Tiszaderzs (STEINMANN 1962).

16. *Lestes viridis viridis* VAN DER LINDEN: Occurs throughout the country along standing waters, and is frequent in individual places. Not frequent in this area of the Tisza, and its larvae were not found: Cserőköz, Tiszafüred, Dead-Tisza.

17. *Calopteryx (Agrion) splendens splendens* HARRIS: Common in Hungary along slow-running brooks and ditches, mainly in flat country. Frequent in every habitat in this area of the Tisza, primarily along the Kis-Tisza and the channels and ditches connected to it, but it can also be found continuously along the living Tisza too.

18. *Gomphus vulgatissimus vulgatissimus* LINNÉ: Frequent in Hungary, mainly in hilly and mountain districts, and common in places. Occurs sporadically in this entire area of the Tisza, and is more frequent at Cserőköz and along the living Tisza.

19. *Gomphus flavipes* CHARPENTIER: Can be found sporadically along the slow-running parts and dead-arms of the larger rivers in Hungary. According to investigations to date in the Tisza valley it appears more frequent than the national average. Its larvae too were found (Oszlár, Tiszafüred). Its imagos too were caught along the Tisza: Kisköre, Tiszafüred, Tiszavalk.

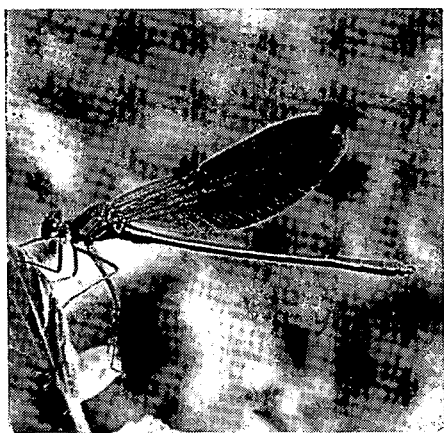


Fig. 5. *Calopteryx splendens splendens* HARR.



Fig. 6. *Aeschna affinis* VAN DER LINDEN.

20. *Brachytron hafniense* MÜLLER: Frequent throughout Hungary. Occurs sporadically in this area of the Tisza: Abádszalók, Dead-Tisza, Cserőköz, Poroszló, Kis-Tisza, meadow at Sarud, Tiszaszőlös.

21. *Aeschna affinis* VAN DER LINDEN: Frequent throughout the country along standing waters. Occurs in this entire area of the Tisza. It swarmed in particularly large numbers on 16 October 1966 in the vicinity of sand-pits along the left-hand embankment in the inundation area of the Tisza near Kisköre. This datum is of interest, as previously this phenomenon was known only in the last third of August (STEINMANN 1959), and it thus provides new information on the time of swarming of this species.

22. *Aeschna mixta* LATREILLE: Common throughout the country. Can be collected sporadically in this area of the Tisza: Cserőköz, meadow at Sarud, Tiszafüred.

23. *Anaciaeschna isosceles isosceles* MÜLLER: Frequent mainly in flat country. It is not rare in this area of the Tisza either, and can be collected mainly along the Kis-Tisza: Cseróköz, Kis-Tisza, Tiszavalk.

24. *Anax imperator imperator* LEACH: Frequent in Hungary everywhere, but mainly along larger lakes. In this area of the Tisza only 3 specimens were collected (Tiszafüred, Dead-Tisza). However, it was observed sporadically in other habitats too; it is very difficult to catch.

25. *Anax parthenope parthenope* SELYS: Occurs around larger open-water lakes mainly in flat country, but in general it is not frequent in Hungary. It is rare in this area of the Tisza: Tiszafüred, Dead-Tisza.

26. *Cordulia aenea aenea* LINNÉ: Occurs throughout the country beside reed-bordered lakes, and is fairly common. It can be collected sporadically in this entire area of the Tisza.

27. *Somatochlora flavomaculata* VAN DER LINDEN: Occurs everywhere along standing waters in Hungary, but it is not frequent. Nor is it rare in this area of the Tisza: Abádszalók, Dead-Tisza, Cseróköz, Tiszafüred, Dead-Tisza.

28. *Libellula depressa* LINNÉ: Common everywhere in Hungary. Occurs in this entire area of the Tisza, and can be collected in large numbers mainly along the Kis-Tisza.

29. *Libellula fulva fulva* MÜLLER: Occurs everywhere in Hungary, and is a sporadically frequent species. It can also be caught sporadically in this area of the Tisza: Cseróköz, Kisköre, Poroszló, Kis-Tisza, Tiszafüred, Dead-Tisza.

30. *Libellula quadrimaculata quadrimaculata* LINNÉ: Frequent everywhere in Hungary, and common in places. Frequent in this entire area of the Tisza. Particularly many specimens were observed in sand-pits along the railway near Tiszafüred.

31. *Orthetrum brunneum brunneum* FONSCOLOMBE: Generally widespread in Hungary, and a frequent species. Appears frequent primarily along the Dead-Tisza at Abádszalók in this area of the Tisza, and its larvae were also found here. Other habitats: Cseróköz, meadow at Sarud, Tiszafüred, Tisza bank.

32. *Orthetrum cancellatum cancellatum* LINNÉ: Frequent throughout the country, and common in places. Occurred too in every habitat of this area of the Tisza. However, its larvae could not be found.

33. *Orthetrum coerulescens coerulescens* FABRICIUS: Common throughout Hungary along standing or slow-running waters. Occurred everywhere in this area of the Tisza too, and appears frequent primarily along the Kis-Tisza.

34. *Crocothemis erythraea erythraea* BRULLÉ: Frequent in Hungary, mainly in flat districts. It can be caught sporadically in this area of the Tisza: Cseróköz, meadow at Sarud, Tiszabólna, Tiszafüred, Tisza inundation area. It is also reported by STEINMANN (1962) from Tiszafüred.

35. *Sympetrum depressiusculum* SELYS: Occurs sporadically throughout the whole of Hungary. It can also be caught sporadically in this area of the Tisza too: Abádszalók, Dead-Tisza, Cseróköz, Tiszabólna, meadow at Tiszánána, Tiszáörvény. It has also been reported from Tiszafüred (STEINMANN 1962).

36. *Sympetrum flaveolum flaveolum* LINNÉ: Frequent throughout the country along standing waters. It is common in every habitat in this area of the Tisza.

37. *Sympetrum meridionale* SELYS: This is the most frequent *Sympetrum* species in Hungary, and in this area of the Tisza too. It occurs in every habitat. Steinmann (1962) also reports it from Tiszafüred.

38. *Sympetrum sanguineum sanguineum* MÜLLER: Common throughout Hungary. It can also be found in every habitat in this area of the Tisza. It is noted from Tiszafüred in the literature (STEINMANN 1962).

39. *Sympetrum striolatum striolatum* CHARPENTIER: Common in most districts of Hungary. Also frequent in this area of the Tisza: Bere, Cserököz, Kisköre, meadow at Sarud, Tiszafüred, Dead-Tisza, Tizsanána, Tizaszőlös. It is also reported in the literature from Tiszafüred (STEINMANN 1962).

40. *Sympetrum vulgatum vulgatum* LINNÉ: Frequent everywhere in Hungary, and common in certain regions. It is also frequent in this area of the Tisza: Cserököz, Kisköre, Poroszló, Kis-Tisza, meadow at Sarud, Tizsabábolna, Tiszafüred, Tiszavalk. STEINMANN (1962) also mentions it from Tiszafüred.

41. *Leucorhinia pectoralis* CHARPENTIER: Occurs in flat districts in Hungary, and primarily on the Hungarian Plain, but not frequent. Only 3 specimens were found in this area of the Tisza: Tiszafüred, Dead-Tisza, Tiszaörvény.

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