

**THE ENDOGEAN AND TROGLOBIONTIC COLEOPTERA  
OF SERBIA (INSECTA, COLEOPTERA), IX. RESULTS  
OF RESEARCH CARRIED OUT AFTER 1983.\***

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Researches of the endogean and troglobiontic Coleoptera of Serbia were initiated in 1976. The first results obtained were formerly reported (NONVEILLER, 1983). During the period after 1983 nearly twenty new species were either collected or received for identification. They belong to the following families or subfamilies: Carabidae (Bembidinae, Trechinae), Staphylinidae (Pedaerinae, Leptotyphlinae, Aleocharinae), Cholevidae (Leptodirinae), Anommatidae and Scydmaenidae.

KEY WORDS: Endogean Coleoptera, Carabidae, Bembidinae, Trechinae, Staphylinidae, Pedaerinae, Leptotyphlinae, Aleocharinae, Cholevidae, Leptodirinae, Anommatidae, Scydmaenidae, Serbia, new species.

## INTRODUCTION

The results obtained by our research of the endogean and troglobiontic Coleoptera of Serbia, initiated in 1976, were presented in the first report (NONVEILLER, 1983). In the course of the subsequent research, additional interesting information was obtained. A relatively large number of new species were collected, as well as new data on the distribution of previously recorded taxa. The recent findings further illustrate the richness of the endogean Coleoptera fauna of Serbia, disclosed in the above mentioned paper. In the course of this second period of our field activities, we revisited the same localities as formerly, as well as others that were not examined during our earlier research. Due to, among other reasons, insufficient funding, our field activities were not very intensive. A more intensive and systematic work, particularly if assisted by trained technical personnel engaged to collect material in the

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field, could without doubt provide significantly more varied and interesting results. Our research project presents a considerable scientific interest, due to the fact that in Serbia there are a relatively varied and specific, though insufficiently studied endogean and troglobiontic Coleoptera fauna, offering the possibility to found interesting and even new taxa. The results reported in the publication from 1983, together with our most recent findings, show that the studies of the endogean and troglobiontic fauna in Serbia not only reveal the existence of new, formerly not recorded taxa, but also can significantly contribute towards a better understanding of the origins and changes of this particular fauna during the geological past of the territory in question and its relationship with the fauna of neighbouring regions.

In the course of the twelve years since the beginning of our studies, although only a limited number of sites were more frequently visited (e.g. mountains Kosmaj, Stol, as well as Ceremošnja), we managed to discover on each of these localities not only one but a number of formerly unregistered taxa belonging to various families of Coleoptera. Thus, four new species from three families were found on Mountain Stol, four new species on Mountain Kosmaj, and three new species from three families near Ceremošnja, and so on. Sometimes a new species, or species formerly not recorded in Serbia, were found in a large number of localities very distant one from the other. For example, the new blind weevil *Ubychia ellipsoidalis* (OSELLA and NONVEILLER, 1982) was collected on five different, sometimes very distant localities, namely Kosmaj, Bukulja, Krupanj, Stapani and Zlatar. The new subspecies of the blind staphylinid beetle *Lathrobium anophthalmum* ssp. *stolense* (PACE, 1984), was found on mountains Stol, Rtanj and Zlatar.

The identification of the obtained material is still under way due to the great number of collected species and to the fact that they belong to various groups of Coleoptera. The representatives of the majority of these groups from our territory were not sufficiently studied up to now. Hence, it was necessary to provide adequate, identified specimens to be compared to them. Unfortunately, these could not always be found in the different collections in our country. Thus an important part of the species collected during the mentioned period is not identified, neither described. Still, we decided to present our most interesting findings in the same form as in our previous report.

## CARABIDAE

**Bembidiinae**(1-3) Genus *Winklerites* Jeannel, 1937

During our eleventh visit to Mountain Stol, in May 1984, where three new species belonging to the families Scydmaenidae and Staphylinidae were previously discovered, we managed to find two males of a new species of a small, blind carabid beetle of the genus *Winklerites*, tribe Anillini.

The discovery of a representative of this genus in Eastern Serbia is surprising, considering that species of this genus were believed to be restricted to the Dinaric range (they were found on Mountain Bjelašnica in Herzegovina, and on mountains Komovi and Durmitor in Montenegro), whereas some species have been described in Greece (Macedonia). From Asia Minor, the subgenus *Parvocaecus* Coiffat, 1956, represented by several species, was described.

Our discovery is also noticable, since a species of the related Carpathian genus *Dicropterus* Ehlers, 1983 was collected not far from Mountain Stol, in Majdan Kučajna (Homolje). Two specimens of this species were found there near the end of the last century, by the entomologist-trader Eduard MERKL from Hungary, and were described by GANGLBAUER in 1900, as *Dicropterus serbicus*, a subspecies of *Dicropterus brevipennis* Frivaldsky, 1879 from nearby Transylvania. We paid several visits to Majdan Kučajna but were unable to find any representative of this species. However, to our great surprise, about ten kilometers from this locality, near the Ceremošnja cave, two females of the genus *Winklerites* were collected. Despite several attempts, however, the males could not be found, thus we are not able to identify this species. Most probable, the specimens from Ceremošnja and from Mountain Stol do not belong to the same species. The search for the lacking male will be continued.

Even more interesting is the discovery of a third new species of the same genus on Mountain Radan, near Kuršumljica, at an altitude of about 1,000 m, where both sexes were collected. By its morphological characteristics, this species differs from all other of the genus so far described in our country. The geological composition of the locality, in addition to its geographical position, markedly differs from other mentioned localities in the territories from where formerly known representatives of the genus *Winklerites* were found.

As a result, the discovery of representatives of the genus *Winklerites* in Serbia have changed our understanding of its range type.

## STAPHYLINIDAE

(4) Genus *Lathrobium* Gravenhorst, 1802

This genus was represented by many specimens in nearly all of the localities from which endogean Coleoptera were collected. This increased the number of sites where we found *Lathrobium anophthalmum stolense* Pace, 1984, described formerly, and collected now near the monastery Tumane (not far from Golubac), at Lepenski Vir (Donji Milanovac) as well as at the monastery Zaova (Malo Crniće, near Požarevac).

A new species of the genus *Lathrobium* was collected on Mountain Jastrebac by Dr. Gabor MESAROŠ (Biological Institute "Siniša Stanković", Belgrade) who was kind enough to submit it to us for identification.

At Majdan Kučajna and at Ceremošnjaja a large series of a specimens belonging to the same subspecies was found. This finding is interesting since it was obtained in the same region where Eduard MERKL collected insects, and from where *Lathrobium anophthalmum* Fauvel was described. Most probably, several species of the same genus are spread in that area.

A female of the genus *Lathrobium* was found on Mountain Beljanica at an altitude of about 1,300 m.

On the basis of these observations it can be supposed that this genus of tiny, blind, wingless and unpigmented staphylinid beetles is represented in Serbia by a comparatively large number of species, each of them spread on a more or less large geographic range.

## Leptotyphlinae

## (5-6) Two new species

The new genus *Egeotyphlus* was described by COIFFAIT in 1957 for a new species from Thrace (Greece). In Eastern Serbia, on Mountain Stol, we have found an additional, new species of this genus, *Egeotyphlus zecevici*, described by PACE in 1984.

In recent years, two so far unidentified, most probably new species from the subfamily Leptotyphlinae, were collected. The first one in an ant-hill in the Southern Kučaj mountains (Sečenj), probably belonging to the genus *Egeotyphlus*. The second species was obtained during a visit to Krupanj in company with Claude BESUCHET from Geneve (Switzerland).

Hence, the above findings increase the number of representatives of this subfamily in Serbia. Aside from the above mentioned species from Mountain Stol, the subfamily Leptotyphlinae were represented on the territory of the former Yugoslavia by two geographic races of a single species, *Gynotyphlus perpusillus* Dodero 1900: ssp. *dalmaticus* Coiffat, 1995, from Central Dalmatia, and ssp. *macedonicus* Coiffat, 1957, from Macedonia.

### Aleocharinae

Genus *Leptusa* Kraatz, 1856

In the first contribution to this series dealing with the endogean and troglobiontic fauna of Coleoptera in Serbia (NONVEILLER, 1983), it was mentioned that a new species of this genus (*Leptusa kosmajensis* Pace, 1987) was found on Mountain Kosmaj, near Belgrade. Thus, with this finding, the total number of representatives of the genus *Leptusa* on the territory of Serbia has increased to four. Now, another, species, can be added to them. It was collected by sifting earth on Mountain Radan, near Kuršumlja, quite a bit away from other localities on which other recorded species of this genus are known.

## CHOLEVIDAE

### Leptodirinae

The most interesting data obtained during our recent research are concerned with this subfamily, represented on the territory of the former Yugoslavia by a large number of troglobiontic and endogean species, i.e. by species that can be found in caves and pits, as well as outside them. Compared to other parts of the mentioned territory, this subfamily was represented in Serbia (besides Sandžak) only by a small number of species. During our recent research, a large number of new taxa, belonging to this subfamily, were found. These were already discussed in our first communication. New information will now be added.

### Tribe Bathysciina

(7-8) Two new genera and two new species.

A relatively large series of specimens belonging to new genus to a primitive Leptodirinae, was caught in meat traps buried in a beech forest near Ceremošnja cave. The description of this taxon is in progress. A second new genus and a new species was obtained in the Svrljiške planine.

## Tribe Antroherponina

(9-10) Genus *Remyella* Jeannel, 1931

Representatives of this genus are endemic to Sandžak (Serbia) and belong to more evolved troglobiontic leptodirine beetles. Three species of the genus *Remyella* are known: *propiformis* (with two subspecies, ssp. *borensis* and ssp. *hussoni*), *puncticollis* and *scaphoides*. They were described by JEANNEL and WINKLER in the 1930s. Recently, GIACHINO & ETONTI (1995) revised the genus and classified all above mentioned taxa in a single species (*scaphoides*), the other representing only as subspecies of it; in addition a new subspecies was described: *droveniki*.

Thanks to the contribution of a large number of speleologists, as well as of specimens collected in the same area by the authors of this report, a wealth of material belonging to the genus *Remyella*, is now available for examination. Aside from the known species, most probably some new taxa of this interesting genus were found. They were provided by Dr. Božidar DROVENIK from Ljubljana, late Dr. Djordje MIRIĆ, mammologist from Belgrade, members of the Academic speleological club (ASAK) from Belgrade, Milan ŽIVKOVIĆ, taxidermist of the Museum of Natural History in Belgrade, as well as from other members of the Speleological Society of Belgrade. This material originates from the Baždár, Kačun and Raška caves, as well as from a recently discovered cave in the South of the Pešter Plateau.

These findings complete our relatively scanty knowledge of the genus *Remyella* and its range. Descriptions of the new species and a revision of the genus are planned. The newly collected material (some species are represented by large series) allows for a critical evaluation of the morphological peculiarities, which formerly has been used to characterise the species and subspecies of the genus.

## Tribe Leptodirini

## (11-12) Two new species from two new genera

Our colleague Božidar DROVENIK, from the Institute of Biology of the Slovenian Academy of Sciences and Arts (SAZU) Ljubljana, kindly provided for identification a large series of highly specialized troglobiontic Leptodirini beetles, from a pit on Mt. Žljeb. Two new species from two, still undescribed genera were discovered in the material. It has been collected several years ago by Dr. B. DROVENIK during a visit to the above mentioned locality, in the company of late Egon PRETNER, from Postojna (Slovenija). The study of these species is currently under way.

## ANOMMATIDAE

(13-14) Genus *Anommatus* Wesmael, 1835

Representatives of this genus of blind, small Coleoptera, not measuring more than 2 mm, are spread from Algeria, across Central and southern Europe and the Balkan Peninsula, to the Caucasus. Two dispersal centers of this genus have been established. One is on the Iberian, and the other within the territory of the former Yugoslavia on the Balkan Peninsula. Nineteen species were known from this territory (DAJOZ, 1977), representing one third of the total number of the species of the genus. While studying material collected by the authors of this paper R. DAJOZ (Pariz), a specialist of this group of insects, recently described three species: *nonveilleri* from Mountain Durmitor (DAJOZ, 1984), *mixtus* from Mountain Kosmaj and *serbicus* from Zaječar (DAJOZ, 1987).

The genus *Anommatus* represents a very interesting group of insects, so we devoted considerable time to collecting specimens belonging to that genus. They live in the soil, mainly under rotting plant. Before our research, no representatives of the genus were known in Serbia. As a result of a better knowledge of their ethology, the authors were able to collect substantial series of different species from a relatively large number of localities. In addition to the four known species, at least ten new species were found in the course of this second period of our study of the endogean fauna of Coleoptera in Serbia. They were collected in Majdan Kučajna (Mountains Homolje), Mountain Sečanj, near Šatornja at the foothills of Mountain Rudnik, and on Mountain Tara. The study of this material is currently under way.

## SCYDMAENIDAE

(15) *Ablepton tumanense* Nonveiller & Pavićević, sp. n. (1990)

In the course of our field activities, we collected on the banks of the Tumane Rivulet, near the monastery of the same name, and of Golubac, on the slopes of North Kučaj Mountains, several specimens of a curious species of the family Scydmaenidae, never seen before. We established that these specimens belong to the genus *Ablepton* from which only one species was known - *Ablepton treforti*, found in Baile Herculana (Romania), near the Danube, downstream from Golubac, and described by FRIVALDSKI in 1877. Despite the relative proximity of these two localities, it turned out that our material belonged to another, new species, of the genus. After several successive visits to the same site, a total of seven males and females were found. The morphological characteristics of this new species show an intermediate

state in the regressive evolution concerning the eyes, the rows of the punctuation on the elytrae, and the frontal depressions. The end-point of this line of evolution is represented by three species found in Asia Minor, and described by BESUCHET (1969) and FRANZ (1988). The latter author transferred these species, characterized by reduced eyes and rows on the elytrae, in the new-genus *Taurablepton*.

The newly described species of the genus *Ablepton* is the first representative of the genus in the fauna of Serbia, and the second representative in Europe, described one century after the first one.

#### *Nanophthalmus serbicus* Besuchet (in press)

This new species, the description of which is in progress, formerly collected in a comparatively large numbers of specimens on mountains Stol and Rtanj, was also found at Ceremošnjia in June 1986, as well as on Mountain Jastrebac (Ravnište), in October 1988, in a beech forest at an altitude of 1.000 m (leg. Dr. G. MESAROS).

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## ЕНДОГЕЈСКА И ТРОГЛОБИОНТСКА ФАУНА ТВРДОКРИЛАЦА СРБИЈЕ (INSECTA, COLEOPTERA), IX. РЕЗУЛТАТИ ПРОУЧАВАЊА ОБАВЉЕНИХ У ПЕРИОДУ ПОСЛЕ 1983. ГОДИНЕ\*

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### И з в о д

Први резултати постигнути на проучавању ендегјејске и троглобионтске фауне тврдокрилаца Србије, започетих 1976. године, објављени су у једном ранијем прилогу (NONVEILLER, 1983). Током овог другог периода нашег рада, сакупљен је интересантан и богат материјал у коме се налази близу двадесетак за науку нових врста. Оне спадају у већи број родова из више трибуса, подфамилија и фамилија тврдокрилаца. У фамилију Carabidae спадају три врсте рода *Winklerites* (Bembidinae), једна врста рода *Neotrechus* (Trechinae). Из фамилије Staphylinidae нађене су три врсте рода *Lathrobium*; две врсте из подфамилије Leptotyphlinae и једна врста из рода *Leptusa*, подфамилија Aleocharinae. Нађен је већи број нових врста и један нови род из подфамилије Leptodirinae (фамилија Cholevidae), као и десетак нових врста ситних и слепих тврдокрилаца, из рода *Anommatus* (фамилија Anommataidae). Од посебног је интереса налаз једне нове врсте рода *Ablepton*, из фамилије Scydmaenidae. То је друга врста рода, не само Србије, већ и Европе. Прва врста је описана пре више од једног столећа са територије суседне Румуније.

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