
RECENZE

ZIEGLER J. (ed.) 2008: Diptera Stelviana, Vol. 1. *Studia dipterologica*, Supplement 16, 395 pp. + 2 maps. Ampyx Verlag, Halle an der Saale. ISBN 978-3-932795-30-5. Price: 70 EUR, Subscription price: 49 EUR. Order via e-mail: stark@ampyx-verlag.de, or via homepage: www.studia-dipt.de.

The first volume of the long-awaited publication on Diptera (flies) of a high mountain area in the Italian South Tyrolean Alps, the Stilfserjoch National Park (Parco nazionale dello Stelvio, the so-called “PNS” in Italian, or Nationalpark Stilfserjoch in German), appeared as a hardbound Supplement 16 of the well-known dipterological series *Studia dipterologica*. The introductory part of this clear and well-arranged publication covers details on “The Study area” and a chapter “Material and methods”, supplied with numerous illustrative colour maps and photos of the studied region and biotopes. The main part, the “Results”, includes full data on the 46 treated families; this makes up approximately a half of the captured and studied material, the second half will be published in Diptera Stelviana, Vol. 2.

The Preface, written by the Director of the National Park Dr W. Platter and the President Cav. F. Tomasi, is presented also in Italian and German, and this international conception is followed for instance in the English Summary, German Prolog, English Acknowledgements, and all Abstracts of the following chapters, written in English (like the whole publication), are presented also as Italian Riassunto and German Zusammenfassung.

The very useful and detailed chapter “The study area” on pp. 15–37 gives all necessary data on the history of the Stilfserjoch National Park, and its original position in the former Province of Bozen (Bolzano) in South Tyrol. The Stilfserjoch National Park was founded already in 1935, and it was named after a small Alpine village of Stilfs (Stelvio); its approximate size of 133,000 ha extends now in the Italian provinces of Bozen, Brescia, Sondrio and Trento. Details on the geographic position, topography, geology, climate, vegetation and altitudinal zones, are well documented by numerous colour maps and pictures of the biotopes. Unusually interesting passages are those on the climate and contemporary changes in the Alpine landscape, documented by several colour photos comparing the landscape now and approximately one century ago.

The author of the introductory parts, Joachim Ziegler of the Berlin Zoological Museum, discusses in detail the ecological altitudinal zones of the Stilfserjoch National Park. He distinguishes 9 zones, from the planar zone (300–400 m a.s.l.) up to the nival zone (3 000–3 200 m a.s.l.), and shows distinct recent environmental changes caused both by long-term climate warming and human impact in the National Park, of which over a half lies at an altitude where rocks and snow are (or were) dominant. Especially the documented increases of mean temperatures in the studied area, and the illustrative colour pictures showing the retreat of the Ortler and Trafoi glaciers within the last 100 years, are important for better understanding of the necessity of thorough recent studies of the Alpine fauna.

The third introductory chapter “Material and methods” on pp. 37–60 describes in detail the collecting methods used in the research programme “Diptera Stelviana”, carried out

between 1995 and 2007. Besides the net collections at more than 100 sites, the Malaise traps, Yellow-tray traps, and Window traps were used. However, as stated by J. Ziegler, the majority of the Diptera were collected with five Malaise traps between 2005 and 2007, which were installed along a transect (shown on a satellite map, Fig. 38) from the lowest submontane area (940 m) to the alpine zone (2 315 m). All the 106 collecting sites, listed under each species in the following family chapters, are fully described in this chapter, including data on the coordinates, altitude in metres, altitudinal zone, biotope type, and the collecting method used. All sites are situated in the Provinces of Bozen and of Sondrio, and are alphabetically listed in Table 9; some are also shown on the maps and aerial landscape photos.

The net-collected specimens were, of course, dry pinned, and the specimens caught in traps were first stored in 70% ethanol. After sorting them into families, the form of a further preparation, either on microscope slides, or mounting on pins or micropins, was discussed or arranged according to the wish of the specialist who studied the corresponding family or groups of families.

The main part of the publication, the “Results” on pp. 61–359, presents elaboration of an approximately one half of the total of 25,280 specimens of Diptera collected within the Diptera Stelviana project, as given by J. Ziegler in the introducing Summary. Altogether 1,094 Diptera species, classified in 46 families, have been studied and are fully documented in this Volume. The results are presented in 32 separate contributions written by the same number of specialists; some of these chapters thus include more than one family – a case of some Nematoceran and Acalyptrate families. The families are arranged alphabetically (not systematically), starting with Acartophthalmidae on p. 65, and ending with Trixoscelidae on p. 355. All the 32 contributions are briefly introduced by explanations regarding the arrangement of each section, system of data listing, and all abbreviations and symbols used. Each family (or a contribution covering a larger number of related families) includes Abstract, Introduction, Material and methods, Species list with data on collected specimens, Results and discussion, some chapters also include a special Acknowledgement, and Literature (list of references), followed by Italian Riassunto and German Zusammenfassung (translated from the English Abstract).

Volume 1 of Diptera Stelviana is concluded by an “Overview of the results” on p. 360, with a very useful and illustrative alphabetical list of the 46 treated families, including data on the number of collected species with numbers of specimens, and their distribution according to the various collecting methods; numbers of newly described species are also presented, including new faunistic records for Italy and South Tyrol. At the real end of the publication there are the References to the General Part, List of 31 authors with addresses, Index of dipterological names, and attached to the hind cover are 4 colour maps showing the topography, geology, vegetation and forest communities in the Stifserjoch National Park.

Considering that the long-term field research was finished only at the end of 2007, and the present publication was published already in December 2008, it covers mainly the so-called “small families” of Diptera, or families with a small number of mountain or alpine species. Based on the experiences from long-term studies carried out by the Austrian dipterist Gabriel Strobl in the Styrian Alps between 1880 and 1910, the families really rich in species in the Alps include Empididae, Hybotidae, Mycetophilidae, Syrphidae, Chloropidae and Agromyzidae. Of these only Mycetophilidae with 275 found species, and Syrphidae with 146 recorded species, are included in the first Diptera Stelviana volume. Surprisingly, besides Muscidae

with 69 species, and Limoniidae with 61 species, the fourth family in the imaginary order of families regarding the number of collected and studied species is Pipunculidae with 68 found species; Strobl mentioned only some 35 species in the Styrian Alps.

An excellent publication which extends our knowledge on the biodiversity of Diptera at high altitudes of the Alps, unfortunately of only a small part of the South Tyrolean Alps, of the Italian Stilfserjoch National Park. Those who study biodiversity and ecology in general would surely wish to have similar studies also from the other parts of the Alps. I am pleased to say that the above reviewed publication may be well compared only with the results of a long-term dipterological research in the north-Bohemian Jizerské hory Mts, published recently in the present journal (*Sborník Severočeského Muzea, Přírodní Vědy*, volumes 26 and 27 in 2008 and 2009).

Souhrn

Suplement 16 mezinárodního časopisu *Studia dipterologica* představuje na 395 stranách 1. díl publikace Diptera Stelviana, plánovaného dvoudílného díla, které shrnuje výsledky dlouholetého dipterologického výzkumu v letech 1995 až 2007, uskutečněném v italském Národním Parku Stilfserjoch, nejstarším alpském parku založeném v roce 1935. Národní park Stilfserjoch se rozkládá v jižním Tyrolsku na rozloze 133 000 ha, na území čtyř italských provincií, a je pojmenován podle obce Stilf (= Stelvio). Publikace zahrnuje podrobné údaje o přírodních poměrech oblasti, je rozlišeno, popsáno a fotograficky dokumentováno celkem 9 výškových zón od 400 do 3 000 m, ale hlavní transekt dipterologického výzkumu s rozmístěnými odchytovými zařízeními byl vytyčen ve výšce od 940 do 2 315 m. Výsledkem výzkumu byl odchyt 25 280 jedinců dvoukřídlého hmyzu, z toho první díl zahrnuje zpracování asi poloviny materiálu. V prvním dílu Diptera Stelviana je rozlišeno 1 094 druhů řádu Diptera, klasifikovaných ve 46 čeledích, řazených podle autorů nebo autorských kolektivů ve 32 samostatných kapitolách. Další čeledi budou zahrnuty ve 2. připravovaném dílu. Z celkového počtu přes 1 000 určených a zpracovaných druhů v 1. svazku Diptera Stelviana bylo 248 druhů dvoukřídlých zjištěno poprvé na území Itálie a 10 taxonů je popsáno jako nové druhy pro vědu. Jednotlivé čeledi dvoukřídlých jsou zde zpracovány podobným způsobem jako v již uveřejněných dvou dílech o dvoukřídlých Jizerských hor zpracovaných ve *Sborníku Severočeského Muzea, Přírodní Vědy*, č. 26 (2008) a 27 (2009), rovněž metody sběru jsou téměř identické, takže přímé srovnání se zjištěnými výsledky v Jizerských horách a v italských Alpách se přímo nabízí.

Milan Chvála

