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The Linsenmaier Chrysididae collection housed in the Natur-Museum Luzern (Switzerland) and the main results of the related GBIF Hymenoptera Project (Insecta)

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Abstract

Historical notes on Walter Linsenmaier, his entomological career and his Chrysididae collection are given. The purpose of this article is to supply the main results obtained during the GBIF digitalization project and the subsequent reorganization of the Chrysididae collection housed in the Natur-Museum Luzern (Switzerland); we also provide the complete list of the 720 taxa described by the Swiss author (species-group and genus-group names). Observations on the type material is given. A new synonymy (valid name is first) is proposed for: *C. consanguinea* Mocsáry, 1889 = *C. consanguinea iberica* Linsenmaier, 1959, **syn. nov.**; *C. pyrophana* Dahlbom, 1854 = *C. pyrophana* var. *orionea* Linsenmaier, 1951, **syn. nov.**; *Hedychridium elegantulum* du Buysson, 1887 = *H. hybridum* Linsenmaier, 1959, **syn. nov.**; *H. perpunctatum* Balthasar, 1953 = *H. insequosum* Linsenmaier, 1959, **syn. nov.**; *Euchroeus* (*Pseudospinolia*) *incrassatus* (Spinola, 1838) = *E. (P.) humboldti jerichoensis* Linsenmaier, 1959, **syn. nov.** A new replacement name *Chrysis vulcanica* Rosa, **nom. nov.** is pro-

posed for *Chrysis brevicollis* Linsenmaier, 1987, nom praeocc., nec Mocsáry, 1899. The lectotype of *Chrysis auriceps* Linsenmaier, 1959 is designated.

Key words: Chrysididae, collection, Walter Linsenmaier, types, new synonymy

Introduction

Walter Linsenmaier was one of the most renowned Swiss painters and entomologists that ever lived. Linsenmaier was born on August 18, 1917 in Stuttgart (Germany). Only one year after his birth his family moved to Switzerland, where he lived until he passed away on October 31, 2000 at the age of 83. Linsenmaier was an artist, earning his first certification as a stucco worker, the same trade as his father, Paul. He then went on to earn a teaching degree in drawing and illustration from the Lucerne School of Arts. He became a professional illustrator specialising in nature illustrations for books and journals, such as “Du” and “Life Magazine”, in the US. The books with his beautiful illustrations on tropical butterflies (*Tropische Schmetterlinge*) (Linsenmaier & Handschin 1949), Orchids (*Orchideen*) (Kupper & Linsenmaier 1952), and tropical birds (*Paradiesvögel und Kolibris*) (Sutter & Linsenmaier 1953) have been translated into several languages and are well known worldwide. The most famous published volume by Walter Linsenmaier is *Insects of the World* (Linsenmaier 1972), with 1,888 illustrations, each one a masterpiece. Linsenmaier's technique was based on pencil sketches, with very accurate and realistic paintings.

In 1951 Linsenmaier, together with his father Paul, a talented taxidermist, established one of the best private European museums in existence: the *Tierweltpanorama*. In the museum more than 800 stuffed animals were shown in their natural habitats: from Alpine regions, to the African Savannah, to the tropical forest of Borneo. For many years the *Tierweltpanorama* was the only natural science museum in the Canton of Lucerne, and the only natural science museum to display tropical animals. The museum closed in 2007. Additional information can be found in a specific volume published by the Natur-Museum (Linsenmaier 1995). When the *Tierweltpanorama* was dismantled, the Natur-Museum produced the documentary “*Tierweltpanorama. Das Erbe der Familie Linsenmaier*” (CH, 2008, documentary, 20 min., colour) by Stephan Heiniger.

The Natur-Museum Luzern dedicated three temporary exhibits to the works of Walter Linsenmaier. A fourth, entitled *Wunderwelt Insekten*, has been open to the public since June 21, 2002 and is one of the most attractive areas in the museum. The exhibit includes all of the insect families in the Linsenmaier collection and won the prestigious Swiss Museum Prize in 2003.

In 1982 Walter Linsenmaier was awarded an honorary doctorate from the University of Bern Science Department for his scientific and artistic achievements. In 1985 he received the *Innerschweizer Kulturpreis*, and in 1992 the *Ernst-Jünger-Preis für Entomologie* from the Federal State of Baden-Württemberg (Germany). More information on the life of Walter Linsenmaier can be found in various articles (Bolli 2000; Corti 1973; Herger 1995, 2000; Lannetta 1986; Niehuis 1995, 1997, 2001a). The Natur-Museum Luzern acquired Walter Linsenmaier's insect collection, consisting of approximately 250,000 specimens (of which 120,000 Hymenoptera) housed in 1,100 drawers, as well the entire Chrysididae collection.

Different Hymenoptera taxa were named after Walter Linsenmaier (e.g. *Leptochilus (Lionotulus) linsenmaieri* Gusenleitner, 1971; *Nomada linsenmaieri* Schwarz, 1974; *Evaetes linsenmaieri* Wolf, 1970) and even one cuckoo wasp: *Parnopes grandior* ssp. *linsenmaieri* Agnoli, 1995 (Fig. 1).

Linsenmaier's Patrimony

Walter Linsenmaier is universally recognized as one of the most important entomologists working on Chrysididae. Over the course of his entomological career, in more than twenty publications, Linsenmaier described 15 new subgenera, some of which were later upgraded to generic level, and 705 new species and subspecies (APPENDIX A). Linsenmaier left behind a significant iconographic patrimony which includes approximately 2,170 published line drawings and pictures, with 70 colour illustrations in 20 plates (APPENDIX C). His studies were revolutionary and his paper “Linsenmaier 1959a” continues to be the most influential reference for all European entomologists studying Chrysididae. The scope of his entomological work is particularly impressive given the fact that he was