

**Gerd Hermann Heinrich** - eminent entomologist (himenopterologist) of 20th century. His life, entirely given up to the study of one of the most complex families of Hymenoptera - ichneumon flies of the family Ichneumonidae (subfamily Ichneumoninae), may serve as an example and role model for every true entomologist. Well-known paleoentomologist A.P. Rasnitsyn (1978) fairly and accurately characterized the life of G. Heinrich as a scientific feat.

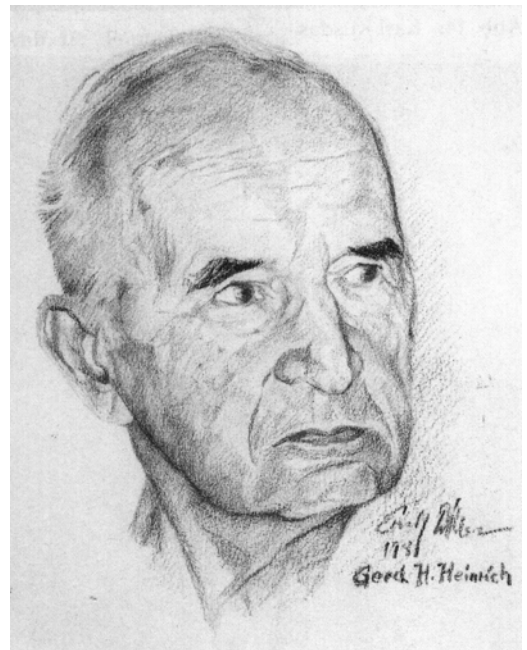
The researcher, who has decided to devote himself to the study Ichneumonini will not be able to do without a thorough mastery of the scientific legacy of this outstanding scientist. More than 50-years studying of the systematics of Ichneumoninae enabled him to create the perfect system of the taxa of supraspecific rank - genera and tribes, that based on the vast experience and, as a consequence, the understanding of the evolutionary relationships between taxa. Therefore, in order to make any changes to the system of the higher taxa of Ichneumoninae, the researcher must have the amount of knowledge and experience, which comparable with those of G. Heinrich.

Over his career he developed a maximum standardized system of taxa description that greatly facilitates taxa identification and comparative analysis. The introduction of such a system to the systematics of any entomological objects, without a doubt would have raised their study to a qualitatively new level.

Gerd Heinrich is the author of 4 major publications on Ichneumonidae, 4 popular travelogues, 93 smaller but significant publications on Ichneumoninae, 3 publications on European mammals, 3 publications on the biology of the birds of Angola, and 2 publications on the systematics of the birds of Angola coauthored with Dr. S. Dillon Ripley.

Heinrich described 1479 species and subspecies of Ichneumoninae from Nearctic, Africa, Madagascar, Oriental Region and Palearctic. Moreover, most of them were described based on his own collections. Therefore the taxa described by him can be called “discovered” as “new to science”.

Heinrich’s major publications are: “Die Ichneumoninae von Celebes bearbeitet auf grund der ausbeute der Celebes expedition G. Heinrich 1930–1932” (1934, 265 pages, 7 plates of figures), “Les Ichneumonides de Madagascar” (1938, 1139 pages, 6 plates), “Synopsis of Nearctic Ichneumoninae Stenopneusticae with particular reference to the Northeastern Region (Hymenoptera)” (1961–1962, 7 volumes, 886 pages, numerous illustrations), “Burmische Ichneumoninae” (1965–70, 10 parts, 457 pages), “Synopsis and reclassification of the Ichneumoninae of Africa south of the Sahara” (1967–68, 5 volumes, 1,258 pages, numerous text figures), “Ichneumoninae of Florida and Neighboring States (Hymenoptera: Ichneumonidae, subfamily Ichneumoninae)” (1977, 350 pages, 8 color plates and numerous text figures). Travelog books were about Heinrich expeditions, including 1 on the Celebes Island (1932), 1 on Burma (1940), and 1 on Persia (1933).



**Gerd Hermann Heinrich**  
07.11.1896 - 17.12.1984

G. Heinrich collections are deposited in Warsaw (C. G. H. I), Poland (Instytut Zoologiczny, Polska Akademia Nauk), Munich (C. G. H. II), Germany (Zoologische Staatssammlung München), at Collection of H. Townes (Gensville, Florida) and partially (species from Madagascar and some others) in Museum für Naturkunde, Humboldt-Universität zu Berlin.

### **For more information about the collections of G. Heinrich:**

C. G. H. I (pre World War II) – Gerd Heinrich's Collection in Warsaw

<http://tereshkin.info/14.doc>

C. G. H. II (post World War II) – SCHMIDT, O. & S. SCHMIDT: Primary types of Ichneumoninae described by GERD H. HEINRICH deposited in the Zoologische Staatssammlung München (Hymenoptera, Ichneumonidae) <http://www.pfeil-verlag.de/04biol/d8391d34.php>

Scientific illustrations of some of the type specimens – <http://tereshkin.info/39.pdf>

### **Biography**

Gerd Hermann Heinrich was born in Berlin, Germany on 7th November, 1896, son of a physician, Dr. Herrmann Heinrich and Margarethe von Tepper-Ferguson Heinrich, heir of a large agricultural estate in the German province (since 1918, Polish) of West Prussia. He was educated at home by a tutor until his 9th year. In 1914 he graduated "primus omnium" from the Askanische Gymnasium in Berlin. At the age of 17 he plans, like his father before him, toward a career in medicine. His interest in natural history had emerged already at an early age. At the early age of 15, through the influence of Professor Heymons, 1 of the Custodians of Entomology at the Museum für Naturkunde, this interest became concentrated on parasitic wasps of the family Ichneumonidae, a large, diverse, and at that time taxonomically poorly known group of insects.

His education was interrupted by the beginning of World War I. He was called up for military service in the cavalry and subsequently became a pilot in the German Air Force. Following World War I, the family estate became a part of Poland where Gerd married and lived with his family. His graduate studies (Humboldt University, Berlin, 1932-37) were again interrupted by World War II.

In 1927, he carries out an expedition in the vicinity of Mount Elbrus in Northern Persia (provinces of Ghilan, Masanderan, and Astarabad). In 1930-1932 he carries an expedition to the island of Sulawesi (Celebes) in Indonesia (Latimodjong Mountains, Menkoka Mountains, and Minahasa) and Molucca Islands (Halmahera and Batjan). This led him to his first major work, "Die Ichneumoninae von Celebes", published in 1934. He also published a travelogue on Celebes in 1932. In 1935, Heinrich undertakes an expedition to the Balkan Mountains and Rhodope Mountains in South-Eastern Europe. In 1938, he publishes the results of processing materials on Ichneumoninae of Madagascar in his major work, "Les Ichneumonides de Madagascar".

In 1934, Dr. Rene Malaise organized a zoological expedition to the north-eastern parts of Burma. He used for the first time a trap for collecting actively flying insects which he invented and constructed. Named after him, "Malaise traps" are widely used at the present time. The material he collected was sent to Gerd Heinrich for identification and classification. The abundance of bizarre, luxuriant, and unknown forms in this collection was so fascinating that Gerd Heinrich decided to carry out a new expedition to Burma. Expedition to the highlands north-western part of Burma (Chin Hills with their highest summit, Mt.

Victoria) was carried out in 1937-1938. The results of processing the materials collected by Dr. R. Malaise and by G. Heinrich were stated by him in the manuscript. The fate of the manuscript and the type material is a revealing example of the difficulties this outstanding researcher had to overcome to achieve his life goal. In 1939, the Second World War began. Poland was occupied and difficulties in continuing the work have become almost insurmountable. By the end of 1943, according to Heinrich, a large monograph was finally ready for publication. During this period in Germany, a so-called "total war" was declared, which made it impossible to publish a monograph. The front line was approaching steadily. To save the manuscript of the monograph and the type material, Gerd Heinrich solders them in metal boxes and secretly buries in a forest in a dry place. He sends a copy of the manuscript to his friend, the physicist professor Dr. Max Vollmer. Postwar Europe was completely devastated. Gerd Heinrich contacted zoological organizations in almost all countries of the continent, but not one of them had the funds for the publication of his monograph. Heinrich refers to the leading U.S. ichneumonologist Dr. Henry Townes and accepts his offer to immigrate to this country. In 1951, Heinrich and his family arrived to the U.S. Difficult living conditions in the early years of emigration, occasional earnings, lack of funds for the translation of the manuscript to English, as well as lack of access to the type material, buried in Poland, put off for the many years a publication of Heinrich's monograph on oriental Ichneumoninae.

Finally, things start looking up, and in 1952-1953. Gerd Heinrich takes part in the zoological expedition to Mexico.

In the years 1953-1963 Heinrich participated in expeditions to Africa, mainly to collect birds and mammals for the Yale University, the University of Kansas, the Field Museum of Natural History and other such institutions. Simultaneously he continued collecting ichneumon flies. During 1953-1955 he participates in an expedition to West Africa: Angola (northeastern and southeastern provinces, Mt. Moco, Mt. Soke). In 1957-1958 - West Africa: Angola (northern and northwestern provinces). In 1961-1963 he took part in an expedition to East Africa: Tanganyika (Mt. Meru, Usambara Mountains, Uluguru Mountains, Livingston Mountains, Rungwe Mountains, Ufipa Plateau), Northern Rhodesia and in 1963 - to South Africa.

G. Heinrich received partial support from the Canadian Department of Agriculture to fulfillment of the work "Synopsis of Nearctic Ichneumoninae Stenopneusticae", which was published by him in 1961-1962 in 7 volumes.

It is now 15 years since the moment when he left the motherland. The realization dawns on him that he'll never get back to access the oriental Ichneumoninae type material he has hidden. Therefore he wrote to the Polish Academy of Sciences in Warsaw, described the place where he buried material, and suggested using mine detectors to find metal boxes with species and digging them up. Polish scientists have done just that, and, to everyone's surprise, the insects were in a great condition. The collection was included to the materials of the Polish Academy of Sciences. To Heinrich an opportunity to get on a provisional basis to work any required material at any time was promised. As Gerd Heinrich writes in his memoirs: "...this obstacle for the publication of the Oriental Monograph was, at last, eliminated".

The materials collected by G. Heinrich in African expeditions, were published by him in "Synopsis and Reclassification of the Ichneumoninae of Africa, south of the Sahara", published through a grant from the National Science Foundation, by the Farmington College Press. In preparation for this monograph G. Heinrich made a round trip through Europe,

visiting all major European museums in order to examine the African types and African specimens kept there. In the course of this journey he stopped in Stockholm where he met the entomologists Dr. Erich Kjellander and Rene Malaise. It was offered to publish new version of "Burmesische Ichneumoninae" by parts in "Entomologisk Tidskrift" where first 7 issues were published. Remaining parts from the 8th to the 11th of were subsequently published in the "Annales Zoologici" by Polish Academy of Sciences during 1974-1980. Thus, this episode of many years came to an end. In his memoirs G. Heinrich bitterly writes: "...how shameful that in an age which can produce and print mountains of worthless papers, junk literature and pornography, there is no money left to publish and thus keep for posterity the results of preparation, hard work, and research of the specialist who may well have devoted a lifetime to his field".

The last major monograph of Gerd Heinrich "Ichneumoninae of Florida and neighboring states" was published in 1977. It contains descriptions of 50 genera and 135 species, 47 of which are new to science.

Throughout his life, invaluable help and support to Gerd Heinrich was provided by his wife Hildegarde.

Until the last days G. Heinrich continued working on systematics of Ichneumoninae. His last article was published in 1980.

On December 17, 1984 this remarkable scientist, passed away at age 88. As reported in "The Lewiston (Main) Daily sun" from 18.12.1984: «He survived by his wife Hildegarde Bury Heinrich of Wilton; son, Dr. Bernd Heinrich of the University of Vermont; daughter, Mrs. Marianne Gerda Sewall of Jefferson and four grandchildren.

Many species of insects, especially Hymenoptera are named after Gerd Heinrich. In honor of his wife and invaluable assistant Hildegarde Maria Heinrich ichneumon fly *Heinrichiellus hildegardae* (Tereshkin, 1996) is named.

#### **Literature:**

- DILLER E. von (1992) Section Hymenoptera in: Chronik der Zoologischen Staatssammlung München.– Spixiana, Suppl. **17**: 83-100.
- GUPTA V. (1989) Contribution of G. Heinrich to the study of the subfamily Ichneumoninae (Hymenoptera: Ichneumonidae) together with a bibliography of his publications.– Oriental insects **23**:337-348.
- WEEMS H. V. (1977) in the Foreword to Heinrich's "Ichneumoninae of Florida and Neighboring States" and an obituary was published by WEEMS (1986) in Florida Entomologist **69**: 281-282.
- WEEMS, JR., HOWARD V. (1986) In Memoriam: Gerd H. Heinrich.– Florida Entomologist **69** (1): 281-282.