## Atalanta (May 1999) 29(1/4): 337-340, Würzburg, ISSN 0171-0079

Professor Io Снои, his life-work and contributions to science and technology – Laudatio <sup>by</sup> Yuan Xiangoun



Professor Io CHOU, born 8.VI.1912 in Yin Xian County, Zhejiang Province, is Director of the Entomological Museum and full professor of the Northwestern Agricultural University of Yangling, Shaanxi, Peoples Republic of China. As tutor he supervises M.S. and Ph.D. postgraduate students and postdoctoral graduates. He is member of the International Scientific Academy of San Marino and Chief adviser of the Wild Protection Commission of the five northwestern provinces of China (Shaanxi, Gansu, Ningxia, Qinghai and Xinjin). All efforts of his scientific life he dedicated to Agricultural Entomology, Insect Morphology, Insect Taxonomy and History of Entomology.

During the earlier period of New China, Prof. CHOU developed and applied the idea of comprehensive treatment and systematic engineering to control and manage the destructive pestwheat-midge. This pest management proved to be very successful in the main wheat cultivation areas of China. The results of this successful work were taken up and propagated by the Agricultural Department of the Central Committee. In new China he has written a new historical page in pest control and therefore he was awarded "Outstanding Scientific and Technological Achievement" and "Advanced Worker in Science and Technology" by the National Scientific Congress. Historians of entomology till recent days assumed that world entomology had started with ARISTOTELES and present names like LINNAEUS and DARWIN, Chinese entomologist, however, have never been mentioned. In 1937 Professor CHOU started to peruse and examine more than seven thousand classics, history records, philosophical works, belles-letters and notebooks. All this finally led him to publish the book "A History of Chinese Entomology" in 1980, after he had revised his manuscript several times over the years. The appearance of this book has drawn the attentions of the entomological world to new historical facts and the book was called "an immortal masterpiece" Professor CHOU's research elucidated that in China applied entomology, as for example beneficial insect rearing, elimination of pest insects by utilization of natural enemies and/or chemicals, but also insect taxonomy is several centuries older than in Europe or America. Meanwhile his book has been translated into English, Esperanto, Italian and German and a great number of monographs and textbooks have cited findings from it.

Furthermore, he became the number one on the ranking list of Chinese Scientists in Entomological Taxonomy because of his most comprehensive work on this field.

In the 1960s he was the first scientist who introduced the Evolutionary and Clastic theory about insect taxonomy in China. According the theory, he redivided the upper categories of insect taxonomy and established twenty one suborders and eighteen superfamilies. His theory of recognizing the Homoptera as five suborders have widely been accepted by many entomologists in the world. He is an adept in grasping the most important problem, and studying it intensively and solving it completely. He even devoted himself to study some categories which are of really great value for insect evolution , such as Protura, Diplura, and some important categories on winged insect evolution. Other important insect groups (including insect pests) he also has investigated intensively, such as Cicadoidea, Membranacoidea, Cercopoidea, Cicadelloidea, Fulgoroidea, Cossoidea, Noctuidea and Drepanidea.

During more than sixty years he has published more than two hundred monographs and papers on Entomology and other aspects of sciences. He discovered three hundred seventy two new species and described twenty eight new genera. As models of taxonomic descriptions CHOU's studies exemplify brevity, charity and scholarship-giving, all of essentials but nothing extraneous. His work makes the knowledge on taxonomy increasing more quickly. He also plays the role of a classic entomologist with net and jars in his luggage, wherever he may travel to locations suitable for collecting insect specimens. Except Taiwan and Xizang, he has visited all provinces of the country to collect specimens. Nearly all species he studied, were collected by himself. By his work a solid basis for Chinese insect taxonomy was established and by training and teaching many high qualified young scientists (e. g. M.S. and Ph.D., Postdocs) he did quite a lot for the future of China.

After fifty years of research he 1989 published "The Fauna of Chinese Diaspidoidea" This book is divided in 3 volumes and covers three hundred sixteen known species, of which two hundred twelve were studied directly by himself. Because of its great importance for agricultural production this book gained highest importance for scientific and technological work.

His book "Monographia Rhopalocerorum Sinensium", published in 1994, is a huge, epochmaking publication in entomology in China. It is the most perfect and greatest work among comparable monographs in this world in best quality. In our country, especially in academic circles, it is winning great honor. The book includes twelve familiae, three hundred sixty six genera, more than one thousand eight hundred species and subspecies, among these eighty five new described species and subspecies. It is illustrated with over five thousand color photos and consists of millions of words.

Compiling the book is a monumental work. In summing up all different opinions of the scientific world on this matter, Prof. CHOU has developed a classification system for the Chinese Rhopalocera, correcting many historical mistakes in butterfly nomenclature. He examined all known names of Chinese butterflies, systematized the Chinese generic names and set up a lot of new Chinese names in accordance to the International Codes of Zoological Nomenclature (ICZN). With the same emphasis (on the ICZN) all generic names were given corresponding Chinese names, so this work has firstly laid a basis for unity and systematization of Chinese butterfly names. More than fifty lepidopterists from all over China, including Hong Kong and Taiwan, took part in compiling the book, which may embodied Professor CHOU's character. Mr. SONG JIANG, Director of the Sate Scientific Committee, praised: "It is a pioneering work in scientific circles" This monograph provokes a new upsurge in studying butterflies. So, within the Entomological Society of China the Butterfly Association was founded in 1996.

In 1979 Prof. CHOU established the international journal "ENTOMOTAXONOMIA" He acts as its chief-editor and has engaged twenty-six authorities from China, UK, USA, Italy, Denmark, India and Japan to collaborate in the editorial board. In the fifteen years passed this journal has published twice the amount of articles on taxonomy as Chinese journals dealing with the same subject have published in total since 1949. He has initiated a relationship for long-term exchange with three hundred entomological and zoological journals from all over the world. This exchange supplies rich data material for research, scholars and postgraduates.

In 1987 the first Entomological Museum of China was founded at the Northwestern Agricultural University. It based on huge amounts of specimens Prof. CHOU and his students had collected all over our country during the passed fifty years. It now possesses about 600,000 insect specimens including five hundred types of new species and twenty thousand books and periodicals in various languages. The Museum has three exhibitions halls which supply a scientific teaching place for students of primary and secondary schools. Entomologists of China and from abroad visit the Museum to perform cooperative research. In 1996 a museum named "CHOU IO Entomological Museum" was built up in his home town, Yin county, Zhejiang Province, in honor of his innumerable contributions to Chinese entomology<sup>1</sup>

Having achieved so much progress in the development of Chinese entomology, Prof. CHOU is praised as "Light of Asian", "Paragon of virtue learning", "Splendid talent of the Entomological

<sup>1</sup> Über die Einweihung dieses Снои Io Entomological Museum berichtete Ептяснвекаек in Atalanta 27(3/4): 665–679. Im Juli oder August 1999 wird in der Nähe von Xi'an, in der Provinz Shaanxi, eine Tagung zu Ehren von Professor Снои Io abgehalten und ausgerichtet werden, der in diesem Jahr sein 60jähriges Berufsjubiläum feiern wird. Hierüber wird dann ein Bericht zu gegebener Zeit in dieser Zeitschrift erfolgen. [ULF EITSCHBERGER]

world", "A person who stands on the peak of the world entomological circle" In 1994 he got Award for Outstanding Contributions to Asian Agriculture in Hong Kong.

Prof. CHOU always pays attention in writing textbooks. So, after foundation of New China, the first textbook for agricultural and forest universities of the whole country entitled "General Entomology" was written by him. Later on this was translated into a Vietnamese university textbook. Further textbooks, written by Prof. CHOU were: "Atlas of Quarantine Insects", Atlas of Injurious Insects of Agriculture", "Atlas Entomological Since" "Entomological Systematic" It must be pronounced that nearly everything was done by himself, when preparing articles and books. More than ninety percent of the figures were drawn by himself. So many figures, which have often been quoted by many other books, are a "crystallization" of science and art.

Being a man constantly in an effort to fortify his colleagues to open up new domains of science and to bring up younger generation of entomologists, Prof. CHOU is happy to direct young teachers, to foster postgraduates and to guide his colleagues to make greater progress in new areas. Twenty M.S. students and sixteen Ph.D. students have been graduated under his supervision. In 1996 he funded the "CHOU IO Reward" for Entomological Taxonomists.

Although Prof. CHOU is now more than eighty years old, his energy does belie his age. He himself is only modestly proud of his 60 years career as entomologist, but he is still full of energy and works more than ten hours every day.

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Zeitschrift/Journal: Atalanta

Jahr/Year: 1999

Band/Volume: 29

Autor(en)/Author(s): Xiangqun Yuan

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