

## To Carlo Leonardi entomologist, friend, and mentor, on his 80<sup>th</sup> birthday



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On March 25, 2022, friends and fellow scholars of Chrysolmelidae from northern Italy met convivially in Milan to celebrate the 80th birthday of their friend and mentor Carlo Leonardi. During the celebrations, other colleagues participated with affectionate messages and phone calls. It was a very pleasant occasion to meet: discussing entomology and much more, we rediscovered the pleasure of a friendship that has bound us together for many years.

The idea of dedicating a collection of entomological essays to our friend Carlo arose on that particular occasion, as a lasting symbol of the esteem and affection we feel for him. Also, foreign colleagues who had the opportunity to get to know Carlo better, either through his numerous publications or in person at the Museum of Natural History in Milan or during field research activities, embraced the project immediately and with great enthusiasm.

In 1967, Carlo arrived very young at the Museum of Natural History of Milan, directed by Cesare Conci, as the curator of the entomology and invertebrate collections. Encouraged by Conci to specialize on a little-studied group, he began to work on Alticini, publishing his

first paper on these beetles in 1970. At that time, Alticini were rather neglected in Italy, and the complex task of reordering and revising taxonomic knowledge required, as it still does today, the examination of a rich literature, mainly available only in German and Russian. Carlo, who had always been interested in the study of foreign languages, was able to acquire a self-taught and devoted understanding of German and Russian, as well as basics of other Balkan idioms. To achieve this, he took advantage of his frequentation of some Milanese bookshops and the occasional availability of a Russian-German dictionary, until he was finally able to read several classics in the original language. Carlo describes his dedication to language learning with disarming simplicity; however, this method of developing language skills perfectly illustrates his ability, meticulousness, and perseverance, which are also reflected in his scientific publications.

Carlo's devotion to the Museum as a scholar and as a curator has always been unconditional throughout his more than fifty-year scientific career. His extreme consistency and ethics have prevented him from owning a personal entomological collection. Nevertheless, Carlo has studied and constantly enriched the Museum's col-



Fig. 1 - First International Alticinae Worker's Symposium in Monaco (August 11-15, 1980): Walter R. Steinhausen, Manfred Döberl, Bohumila Špringlová Bechyně, Gerhard Scherer, Carmen Segarra, David G. Furth, Carlo Leonardi, Terry N. Seeno, Mauro Daccordi, Serge Doguet, Carmelén Pedrerol Petitpierre, Eduard Petitpierre. / Primo Simposio Internazionale degli Studiosi di Alticinae a Monaco (11-15 agosto 1980).

lection with new specimens, going far beyond his work duties, often personally funding the collection trips and study missions that he deemed necessary for the complete fulfilment of his institutional role. Thus, he has elevated the Museum's current collection of Alticini to a valuable reference point for all specialists in the field. After all, Carlo's collaboration with the Museum has never ceased, even after his retirement, and still continues usefully and assiduously.

Many of us, who have approached the study of Chrysomelidae for different reasons, had the opportunity to meet Carlo at some point. We initially approached him as young inexperienced students eager to know how to identify some specimens collected in the countryside around our home, but soon found ourselves completely captivated by him and immersed in the phantasmagorical world of entomological research: a "magic box" that Carlo was able to open with enthusiasm. Behind his generous hospitality, is an entomologist whose talent for careful morphological analysis and ability to grasp decisive steps in comparative diagnosis are hard to find together. He also has an extraordinary, spontaneous ability to identify and guide people he considers passionate and promising, leading their scientific growth in the right direction. His advice on how to approach a study of entomological taxonomy and/or biogeography in a scientifically sound manner becomes therefore invaluable: according to him, a thorough study cannot be separated from a deep knowledge of bibliographic sources and examination of typical materials preserved in museums. This is particularly true nowadays, when the widespread availability of advanced technologies and the apparent simplicity of finding references on the internet may lead one to believe that these fundamental steps can be overlooked or even ignored.

The great relevance of Carlo's scientific production, mainly focused on the Alticini, with rare but important incursions into other groups of Chrysomelidae, is explained by his ability to focus on delicate taxonomic issues on a Mediterranean scale through the identification of the most

appropriate methods of analysis to obtain the best scientific result in the different contexts he deals with. Carlo, as a true master, emphasized the importance of recognizing minute morphological details in order to understand the relationship between taxa, as well as demonstrating how dialogue and interchange between specialists, even the most arduous and tiring, are required to interpret what initially appeared puzzling or taken for granted. This is a fundamental lesson from him, who has been able to cope with the great changes that have characterised natural sciences over the last fifty years and that are still taking place. Apart from rigorous morphological description, biometrics, statistics, numerical systematics and phylogenetics, he witnessed with interest and fair constructive criticism the advancements in molecular biology.

Carlo's extraordinary eclectic culture, which includes, in addition to entomology, art, music, paleontology, history, Italian cinema, and comics (his uncle was a renowned cartoonist), completes the picture of a truly remarkable personality.

The papers collected in this issue of Natural History Sciences cover various groups of Chrysomeloidea, highlighting how much work has been done so far and how much remains to be done starting from basic  $\alpha$ -taxonomy studies about this huge beetle complex that comprises tens of thousands of species. In this context, the work of scholars like Carlo, who added cultural, historical, and naturalistic value to natural history museum collections, is fundamental. This is a precious legacy that cannot and must not be dispersed or forgotten, as it would imply the loss of an extraordinary scientific, cultural, and human heritage for future generations.

The present collection of scientific essays is a tribute to Carlo in the hope that, as happened to us, all young naturalists will find a mentor as sensitive and talented as Carlo Leonardi and with the same willing to share his gifts with great generosity.



Fig. 2 - Orcières (Champsaur) near St-Léger-les-Mélèzes (June 6, 2011): Carlo Leonardi, Gianfranco Liberti, Roger Vincent, Serge Doguet, Philippe Pone, Franck Duhaldorde. / Orcières (Champsaur) presso St-Léger-les-Mélèzes (6 giugno 2011).