



1

Entomologist Prof. ZHANG Runzhi

Dr. ZHANG Runzhi (R. Zhang) at the CAS Institute of Zoology (IOZ) was granted the Award for his contributions to invasive insect identification and agricultural pest control. He proposed a new concept in plant protection together with CAS Member Prof. ZHANG Guangxue (G.X. Zhang), which is named 'Mutualistic Plant Protection (MPP).' Emphasizing that mutual plants should and can be used as effective factors in biological control, this new concept is deemed to have enriched traditional theory of plant protection. Dr. ZHANG presided over an effective cotton aphid ecological management system using a marginal alfalfa zone to breed natural enemies for controlling aphids. This practice has been widely implemented



Dr. ZHANG working in the field.



- ① A cotton branch attacked by a species of cotton aphids, *Aphis gossypii* Glover. ZHANG's work has contributed a lot to the biological control of this pest, largely reducing the use of pesticide.
- ② Larvae of a disastrous invasive pest insect, the Colorado potato beetle. To stop this pest from spreading, ZHANG and his team developed a series of controlling techniques. The widely practice of these techniques has secured the safe production of potatoes nationwide.
- ③ A lateral view of *Hylobitelus xiaoi* Zhang, one of the 120 new species identified and described by Dr. ZHANG.



in the Xinjiang Uygur Autonomous Region and led to a significant reduction of pesticide use. In order to control the spread of a destructive invasive pest, namely the Colorado potato beetle, ZHANG and his team developed many controlling techniques, which have been widely practiced around/within the areas plagued with pest occurrences, contributing significantly to the protection of safe potato production nationwide. On the other hand, ZHANG has identified and described one hundred and twenty new species such as *Hylobitelus xiaoi* Zhang alone or jointly with others.

Before the awarding, Dr. ZHANG had received two

Second-Prizes from the National Science & Technology Awards (both as the first chief contributor). He suggested and participated in the drafting of national plans for pest quarantine management. An example for his contributions to the planning is the suggestion for establishing a block zone to stop significant plant pests and diseases from spreading. So far, ten of his scientific suggestions have been adopted by state leaders and relevant state departments.

Dr. ZHANG has published 230 academic papers (of which 30 in SCI-cited journals), and 10 monographs or translations, etc. He is also the holder of two national patents.