

STUDY ON DISPERSAL OF *ANOPILOPHORA GLABRIPENNIS* (MOTSCH.) (COLEOPTERA: CERAMBYCIDAE) POPULATION

LI Guo-hong<sup>1</sup>, GAO Rui-tong<sup>1</sup> and Michael T. SMITH<sup>2</sup>

<sup>1</sup>The Research Institute of Forest Ecology, Environment and Protection, Chinese Academy of Forestry, 100091, Beijing, China

<sup>2</sup>Agricultural Research Service, USDA, USA

Email: guohong@mail.forestry.ac.cn

The dispersal regulations of *Anoplophora glabripennis* (Motsch.) were studied by using the mark-recapture method in Yongjing County, Gansu Province in 1999 and 2000 successively. On the basis of collecting the dispersal data by the time-series process of *A. glabripennis* adult population, dispersal pattern of *A. glabripennis* adults in poplar shelter forest network was studied and the factors that have effect on the dispersal were analyzed. The results indicated that the spatial pattern of *A. glabripennis* adults in the shelter forest was negative binomial distribution, which was aggregative distribution. The dispersal density of *A. glabripennis* adults decreased with the increase of distance and time, the relationship between the dispersal distance and the amount of adults could be described by the mathematic model  $y = 4203.5683x^{-1.1276}$ . The population dispersal had obvious direction. There was not a close relationship between the dispersal and the amount of hosts in a certain extent. So it was caused mainly by the environment. Meteorological factor analysis indicated that the dispersal pattern was affected mainly by the wind direction. The amount of recapture at all direction had negative relationship with the same wind direction and positive relationship with the opposite wind direction, while it had not close relationship with wind speed, temperature and relative humidity. There was no difference of dispersal direction and distance between male and female adult of *A. glabripennis*, only the amount of male adult was more than the female. It could disperse to more than 2000 m and even more. The observed farthest dispersal distance of the adult was 2644 m in 2000.

MAIN SPECIES OF LONGICORN BEETLE DAMAGING ON BREAD-LEAF TREE IN CHINA

GAO Rui-tong and LI Guo-hong

Institute of Forest Protection, Chinese Academy of Forestry, Beijing, China

Email: ruitong@prot.forestry.ac.cn

There are mainly 5 species in China, i.e. *Anoplophroa chinensis* (Lamiiona), *Anoplophroa glabripennis* (Lamiiona), *Apriona germari* (Lamiiona), *Batocera hersifieldi* (Lamiiona) and *Trirachys orientalis* (Cerambycinae). *A. chinensis* is mainly distributed in Fujian, Hunan, Guangdong Provinces and Guangxi Autonomous Region; *A. glabripennis* in northwest, northern, central and southeast China; *A. germari* and *B. hersifieldi* in northern, central, southeast and southern China; *T. orientalis* in northern, central and southeast China. *A. chinensis* mostly infests *Citrus* spp., *Firmiana* spp., and *Casuarina* spp., and damages seriously in shelterbelt along the coast Southeast China. *A. glabripennis* mainly infests *Populus* spp., *Salix* spp., *Ulmus* spp., and *Acer* spp., and damages seriously on poplar in shelter-forest of Northwest China. *A. germari* infests *Populus* spp., *Salix* spp., *Ulmus* spp. and *Morus* spp. and damages seriously on the poplar forest along Yangtze River Valley and Northern China. *B. hersifieldi* infests *Populus* spp., *Salix* spp., *Juglans* spp. and damages seriously on the poplar forest along Yangtze River Valley and the walnut forest in northern China. *T. orientalis* mainly damages *Populus* spp., *Salix* spp., *Sophora* spp., and willow and Chinese scholartree were damaged seriously in many parks in northern, central and southeast China.

ON SOME PACHYLAELAPTID (MOTHS: PACHYLAELAPTIDAE) FROM CHANGBAI MOUNTAIN

BEI Na-xin, SHI Cheng-min, YIN Sui-gong and LI Guo-hong

College of Plant Protection, Shenyang Agricultural University, Shenyang 110161, China

Email: wuyh09@vip.sina.com

During the survey from 1981 to 1993, Seven species belong to the Pachylaelaptidae had been collected from Changbai Mountain, Jilin Province, China. There are five new species, i.e. *P. tianshanicus* sp. nov., *P. buyakovae* Goncharova et Koroleva (1974) (1977), *P. orientalis* Koroleva (1977) and *P. shanxiensis* sp. nov. Two species belong to genus *Pachyseius*: *P. shanxiensis* sp. nov. et al. (1986) and *P. orientalis* Nikolsky (1929). The other three species are new records to Chinese Acarine Fauna.

STUDIES ON THE BIOLOGICAL AND CHARACTERISTICS OF *IPS SUBELONGATUS*

GAO Chang-qi and SUN Shou-hui

Jilin Provincial Academy of Forestry Science, Changchun, China

Email: lkysbs@mail.jl.cn

*Ips subelongatus* Motschulsky were raised in laboratory using fresh baits for studying the biological characteristics of this bark beetle during 1998-2000. Lishu County, Jilin Province was described as the main distribution area that temperature was a main factor affecting the biology of *I. subelongatus*. The initial temperature for egg, larva, pupa and adult was 6.5, 10.5, 14.5 and 18.5°C respectively. The generation durations were 48, 39 and 33 days. In Jilin Province, there were 3 generations with some exceptional individuals. The nature enemies for this pest are *Tomimicobia seitneri* Ruschk, *Coelodes* sp.

THE OCCURRENCE OF GNATS IN THE FOREST AND DAMAGE TO FUNGI IN ZHEJIANG PROVINCE

YU Xiao-xia<sup>1</sup>, CHEN Xue-xin<sup>1</sup>, WU Hong-wei<sup>2</sup>

<sup>1</sup>Institute of Applied Entomology, Zhejiang University, Hangzhou 310029, China

<sup>2</sup>Department of Biology, College of Forestry, Zhejiang University of Forestry, Lin'an 311300, China

Email: xxchen@zju.edu.cn

The gnat insects belong to the family *Diptera* (Insecta). This group is an important part of the forest ecosystem, and some of them are actual pests of cultivated edible fungi in Zhejiang Province because most of them feed on fungi growing on mushroom. More than 4000 species of gnats are recorded in the world, but no exact numbers in China has been published. Recently, 10 species of Exechiini of the subfamily *Mycetophilinae* in Zhejiang Province. The results showed that 9 genera (i.e. *Anatella* Winnertz, *Exechiopsis* Tuomikoski, *Allodiopsis* Tuomikoski, *Allodia* Winnertz and *Cordyla* Meigen) occur in this province. The damage to the local culture of mushrooms and evaluated.