

Abstract

In the second year of this project, the identification of chigger mites in Kinmen County has finished. There are totally 21,127 chigger mites that have been identified. Five genera and 8 species were differential, including *Leptotrombidium deliense* (53.40%), *L. scutellare* (33.43%), *Walchia chinensis* (12.06%), *L. yui* (0.70%), *Odontacarus majesticus* (0.28%), *Ascoschoengastia indica* (0.08%), *Helenicula* sp. (0.04%) and *L. imphalum* (0.01%). According to the data of rickettsia harbored by chigger mites in Kinmen County, it is very obviously that *L. deliense* is the vector of tautaugamushi disease in summer and *L. scutellare* in winter. *Walchia chinensis* is also infected by rickettsia, although they are zoophilic, it may play the role in transmission of the pathogens between animals. Determining the serotypes of rickettsia with restriction enzyme *Hha*I and *Sfa*NI in the PCR product, most of the samples were like Karp and Gilliam, others were sequencing and aligning in NCBI gene bank. There are like LA-1, Sxh951, Kuroki, Boryong, Saitama and LA-1 delete. The result of survey the abundance of rats in Hwalian county found there were 5 rodentia rats: *Rattus losea*, *Bandicota indica*, *Mus caroli*, *R. coxinga*, *R. rattus* and 1 insectivora--*Suncus murinus*. The total capture rate is 15.76%, and the percentage of population were 54.93%, 36.97%, 5.63%, 1.76%, 0.35% and 0.35% respectively. The chigger mite index, which in the top of the year was 443 in June 2001 and the bottom was 77 in April 2001. There was an obvious distribution with season, and the top was in summer. The positive rate of anti-rickettsia antibody in rats was 95.8%, 76%, 79.5%, 82.1%, 89.8% and 93.2% respectively from August 2000 to June 2001. Identification of chigger mites collected from Hwalian County hasn't finished. The primary result from 2,577 chigger mites, found 2 genera and 4 species. There are 2,034 chigger mites been identified, and 543 chigger mites waiting for further identification. The major species was *Leptotrombidium deliense*; its percentage of population was 66.82%. The second one was species belong to *Walchia* spp. , and others were a few number of *L. imphalum* and *L. kawamurai*. The survey of chigger mite has finished in NanTao County. Due to the capture of rats was too few, there are much fluctuation on the analysis of data.

Keywords : scrubs typhus ; orientia tsutsugamushi ; chigger mite identification ; Taiwan