SCANNING ELECTRON MICROSCOPY STUDIES OF CTENOCEPHALIDES FELIS FELIS AND CTENOCEPHALIDES FELIS ORIENTIS (SIPHONAPTERA: PULICIDAE) STRUCTURES

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Abstract - Fleas can be important vectors of disease, but the most widespread complaint about them concerns the annoyance cause by their bites, which may result in considerable discomfort and irritation. The most common nuisance flea is the cat flea, Ctenocephalides felis which increased in abundance in many areas, replaced the dog flea on domestic dogs. Prevalence rates range from 5% to 100%. In Thailand, C. felis orientis, C.felis felis were found on cats and dogs. Ctenocephalides canis is rarely found on Thai domestic dogs while C. felis orientis is the most common species. The dog flea is closely related to cat flea and is very similar in appearance and biology. The dog and the cat flea can be distinguished by the characteristics of the very small structures and some structures only found in female. The external morphology of the head and appendages of adult C. felis orientis and C.felis felis was described based on scanning electron microscopy, comparisons being made between male and female specimens. *C. felis felis frons are elongate and pointed anteriorly but C. felis orientis* frons are short and broadly rounded anteriorly. *C. felis orientis* female has 3-4 minute bristles at the dorsal of antennal fossa while this structure absents in *C. felis felis* female, but present numerous (13-18) in all males of the genus Ctenocephalides. The posterior margin of the hind tibia of all of Thai cat and dog flea samples have only one notch bearing a stout seta between the longer post-median and apical setae indicated that they are not C. canis. In practically, most fleas were identified and determined to sex or ambiguous structures by using stereoscope or low-power binocular microscope. The study in more details of cat and dog flea taxonomic significance structures by using scanning electron microscopy will be result in useful knowledge for subspecies identification and differentiation closely related species.

Keywords - Ctenocephalides Felis Felis, Ctenocephalides Felis Orientis, Cat and Dog Fleas, Scanning Electron Microscopy.