九州大学学術情報リポジトリ
Kyushu University Institutional Repository

Do You Believe a “Swimming Wasp” ?

Hirashima, Yoshihiro

Inokuchi, Marehide

Yamagishi, Kenzou

https://doi.org/10.5109/2630

出版情報：ESAKIA. 39, pp.9-11, 1999-03-31. Entomological Laboratory, Faculty of Agriculture, Kyushu University
バージョン：
権利関係：

ESAKIA, (39): 9-11. March 31, 1999

Do You Believe a "Swimming Wasp" ?

Yoshihiro HIRASHIMA
Entomological Laboratory, Faculty of Agriculture,
Kyushu University, Fukuoka, 812-8581 Japan

Marehide INOKUCHI
9499-9 Shimanouchi, Miyazaki, 886-0121 Japan

and

Kenzou YAMAGISHI
Entomological Laboratory, Faculty of Agriculture,
Meijo University, Nagoya, 468-8502 Japan

Abstract. Unbelievable swimming behavior of a wasp of *Tiphodytes* (Scelionidae, Hymenoptera), an egg-parasitoid of the pond skater, *Metrocoris historio* B. White (Gerridae, Hemiptera) is reported, and the photos of this wasp swimming beneath the water are taken for the first time in the world.

Key words: Hymenoptera, Scelionidae, swimming behavior,*Tiphodytes*, *Metrocoris historio*.

Imms(1925), in his famous "A General Textbook of Entomology", writes "One of the most remarkable genera (in the family Mymaridae) is *Polynema* which parasitizes Hemiptera: *P. natans* utilizes *Notonecta* as its host and both sexes swim readily beneath the water by means of their wings".

One of us, Hirashima, has long been wondering about this behavior since he first read Imms some 45 years ago, and wanted to see the behavior of this kind of wasp with his own eyes. As late as 1998, at last he was able to observe the hehavior of swimming wasp, with assistance from Inokuchi, in Miyazaki City.

Inokuchi was lucky enough to collect many specimens of a wasp of the genus *Tiphodytes* (Scelionidae) (identified by Yamagishi), which is parasitic on the eggs of the pond skater, *Metrocoris historio*, in Saito City, Miyazaki Prefecture, Kyushu. He found that *Tiphodytes* is fairly common even in winter along the streamlet in which the pond skater lives, and easy to collect by the Yellow Pan Trap which was provided by Yamagishi. The wasp on which Hirashima observed its swimming behavior was one of those collected by Inokuchi by the Yellow Pan Trap.

It is almost unbelievable, and amazing, to watch a tiny (about 1 mm long), fragile wasp beats its wings quite powerfully in the water and swims quickly. We are happy to publish the photos (taken by Inokuchi) of this "swimming wasp" for the first time in the world.

Fig. 1. Three wasps of *Tiphodytes* sp. in the water. One is swimming, one is just started to swim, and the other is on the grain of sand.

Fig. 2. Two wasps of *Tiphodytes* sp. in the water. One is swimming, and the other is on the grain of sand.

So far as we know, behaviors of "swimming wasp" were briefly mentioned by Marchal (1900), Clausen (1940), Masner (1972), Richards and Davies (1977), and Ito (1980) in addition to Imms (1925).

Acknowledgements

We thank Dr. L. Masner, CLBRR, Agriculture Canada, for introducing a technique to set the Yellow Pan Trap on the edge of water. We also thank Dr. K. V. Krombein, Smithsonian Institution, for reading of the manuscript, and Dr. J. Kojima, Ibaraki University, Mito City, and Dr. K. Konishi, National Institute of Agroenvironmental Sciences, Tsukuba City, for useful suggestion to prepare this paper.

References

Clausen, C. P., 1972 (1940). *Entomophagous Insects*. pp.253-254.

Imms, A. D., 1925. *A General Textbook of Entomology*. p.714.

Ito, K. 1980. Life History of *Tiphodytes gerriphagus*. *Insectarium, Tokyo*, **17**(10): 12-14. (In Japanese)

Marchal, P., 1900. Sur un nouvel Hyménoptère aquatique, le *Limnodytes gerriphagus* n. gen., n. sp. *Ann. Soc. Ent. Fr.*, **69**: 171-176.

Masner, L., 1972. The Classification and interrelationships of Thoronini (Hymenoptera: Proctotrupoidea, Scelionidae). *Canadian Ent.*, **104**: 833-849.

Richards, O.W. & R. G. Davies, 1977. *Imms' General Textbook of Entomology. 10th ed.*, p.1225.