## Notes on a swimming *Polistes olivaceus* (DeGeer, 1773) (Hymenoptera, Vespidae, Polistinae) in Seychelles

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In warmer climates many insect species are attracted by swimming pools especially during sunny and calm days. This is mainly caused by the reflection of the blue sky in the water. Entomologists benefit from this fact, but owners and tourists often consider the floating insects as a nuisance. I have collected many species of Hymenoptera in swimming pools in several countries. As most of them were dead, I never thought about the swimming abilities of Hymenoptera.

This study, which is based mainly on photos and films made with a Canon S110 and a Samsung Galaxy S4, has been carried out at La Roussette Hotel (Au Cap) on the main island Mahé. At approximately 14.55 on 27.04.2015 I observed a male of the Yellow Wasp, *Polistes olivaceus* (DeGeer, 1773) (Vespidae, Polistinae), landing on the water surface in the swimming pool. After swimming at least 65 seconds the male left the swimming pool. The distance was about two metres. As I did not film the whole action, I estimate the time of swimming at 75-80 seconds.

Polistes olivaceus can stay for a certain period above water due to the high surface tension of water in combination with the elongated legs and other body characteristics. The wasp swims mainly with the fore and middle legs, while the hind legs are mostly used like a "manoeuvrable outrigger". The fore and middle legs are alternately (right fore leg, left middle leg) used for swimming, but only the tarsi and tibiae are immersed briefly in water (Photo 1). In addition the wings are sometimes used to accelerate the speed. Leaving the water near tiles bordering the pool was no problem for the wasp. All legs of one side must be out of the water to climb the vertical tiles, in doing so the wasps bends the abdomen upwards.

Days later I found an apparently dead female of *Polistes olivaceus* floating in the swimming pool. After I had lifted the wasp out of the water with my right forearm, the female started to crawl and flew away shortly thereafter. Unfortunately it was not possible to observe the behaviour of a wasp continuously from landing on the water to death.

Some years ago (24.04.2010) I made a photo of *Polistes olivaceus* landing on a yellow blossom floating in a pool of the Rivière Cascade Victoire on Rodrigues (Republic of Mauritius), but I did not make biological notes.

*Polistes olivaceus* is a terrestrial predator and does not hunt in the water or on the water surface or carries the prey on the water surface like some spider wasps of the genus *Anoplius* Dufour, 1834 (Pompilidae, Pompilinae), e.g. *Anoplius depressipes* Banks, 1919 (Roble 1985) or *Anoplius eous* Yasumatsu, 1936 (Shimizu 1992).

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## References

Roble, S. M. (1985): Submergent capture of *Dolomedes triton* (Araneae, Pisauridae) by *Anoplius depressipes* (Hymenoptera, Pompilidae). *Journal of Arachnology* **13** (3): 391-392.

Shimizu, A. (1992): Nesting Behavior of the Semi-Aquatic Spider Wasp, *Anoplius eous*, Which Transports its Prey on the Surface Film of Water (Hymenoptera, Pompilidae). *Journal of Ethology* **10** (2): 85-102.

**Photo 1**: Swimming male of *Polistes olivaceus* (DeGeer, 1773) (Photo: M. Madl).

