

## Record of *Tramea virginia* (Rambur, 1842) (Odonata: Libellulidae) from the West Pacific Ocean

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**Abstract:** This paper provides a photo of a male *Tramea virginia* (Rambur, 1842) taken from the West Pacific Ocean, approximately 30 km east of the nearest land. This photo serves as a migration record, and the paper also briefly discusses the migration behavior of the genus *Tramea* Hagen, 1861.

**Key words:** Migration, Oriental region, dragonfly, Anisoptera

Dragonflies are renowned for their remarkable transoceanic migrations, a phenomenon observed on a global scale (May 2013), including recent reports from Taiwan (Ma et al. 2022, Hu et al. 2023). The genus *Tramea* is known for its excellent migratory abilities, attributed to its notably expanded hindwings that enhance gliding (May 2013). Migration records of several species of *Tramea* have been reported (e.g., Dumont 1977, Soltesz 1992, May 2013, Futahashi & Kita 2019, Ozono et al. 2022). Two *Tramea* species are found in Taiwan: *Tramea virginia* (Rambur, 1842) and *T. transmarina* Brauer, 1867. Both species have migration records in Japan (Futahashi & Kita 2019, Ozono et al. 2022). However, there are no such records of this genus in Taiwan.



Figure 1. The male individual of *Tramea virginia* observed in this paper. The red star indicates the observation site.

On April 10, 2023, a dragonfly was discovered and photographed flying above the sea surface from a birdwatching boat in the West Pacific Ocean near the east coast of Taiwan on a sunny day. The dragonfly briefly appeared around 10 am and disappeared after 30 seconds, seemingly during migration. The locality where the dragonfly was observed is approximately 30 km east of Nanao Township, Yilan County, Taiwan (24.423, 122.027). Upon examining the pictures, the author confidently identified it as *T. virginia*, primarily based on the distinctive broad dark patch with a paler brown interior on the anal region of the hindwings. The migration direction of the observed dragonfly is unknown.

Based on the record, there is a possibility of a migrated population of *T. virginia* in Taiwan. However, detecting this potential population is challenging due to the species' common and widespread presence throughout the entire island and its surrounding smaller islands. In addition to *T. virginia* and *T. transmarina*, Ozono et al. (2022) have also listed *T. loewii* Kaup, 1866, and *T. basilaris* (Palisot de Beauvois, 1805) as migratory species in Japan. Given that both of these species have extensive distributions in Southeast Asia, there is significant potential for them to have also migrated to Taiwan.

The photo was taken using a Canon EOS R5 camera with an RF100-500mm f/4.5-7.1L IS USM lens, and the map was created using SimpleMappr (Shorthouse 2010). The author extends his gratitude to Jeran Lin (Yilan County, Taiwan) for coordinating the field trip.

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## 大華蜻蜓（蜻蜓目：蜻蜓科）來自西太平洋上的紀錄

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**摘要:** 本文提供拍攝自西太平洋的大華蜻蜓 (*Tamea virginia*) 雄蟲照片，該處距離最近的陸地約 30 公里，此紀錄被認為是遷移中的大華蜻蜓，文中亦簡短討論斜痣蜻屬 (*Tamea*) 的遷移行為。

**關鍵字:** 遷移、東方區、蜻蜓、差翅下目