**SSRS INABIODIV**
**SPECIES PROFILE AND INFORMATION**
Data is from direct observation and review on recent research paper

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Online Profile

# *Orthetrum chrysis*

Spine-tufted Skimmer, Crimson-tailed marsh Hawk

Amelia Dwi Kurnia Hidayah, Rosa Apriliani Susanto, Usnil Khotimah, Avinda Fani Ari Umayana, Fildzah Wahyu Izzati, Popi Ithriyatina, Fathan Nurhuda, Aisyah Salsabillah Putri, Aulia Ulfa, M. Miftakhul Ulum, Muhammad Desna Noronhae, Senjaya Mercusiana

Corresponding Author:
ameliahidayah@apps.ipb.ac.id

## CONSERVATION STATUS

**IUCN RedList**
Least Concern (2010)

**CITES**
This species is not listed in the CITES Appendices

**Government of Indonesia**
Not Protected (Regulation of the Minister of Forestry Number 106 of 2018)

## OVERALL DISTRIBUTION

Indonesia, Asia Tenggara, India, Sri Lanka, Asia Timur

## OVERVIEW

*Orthetrum chrysis* is a dragonfly species from the family Libellulidae that is commonly found in tropical and subtropical regions of Asia, including Indonesia. This species is easily recognized by its metallic reddish-brown abdomen and dark thorax. *Orthetrum chrysis* plays an important ecological role as both predator and prey, helping control populations of small insects such as mosquitoes, while also serving as a food source for birds and other wildlife. The species typically inhabits freshwater environments such as ponds, slow-flowing streams, and wetlands, showing good adaptability to disturbed habitats.

**Citation**
Hidayah ADK, Susanto RA, Khotimah U, Umayana AFA, Izzati FW, Ithriyatina P, Nurhuda F, Putri AS, Ulfa A, Ulum MM, Noronhae MD, Mercusiana S. 2026. Indonesia Species Profile of Orthetrum chrysis (Odonata: Libellulidae). *SSRS INABIODIV Species Profile and Information.* Vol. 2: No. 0008. https://publishing.ssrs.or.id/ojs/index.php/ssrs-inabiodiv

**Author affiliation:**
IPB Sustainable Science Research Students Association - IPB University (ADKH, RAS, UK, AFAU, FWI, PI, FN, ASP, AU); Undergraduate Student in Department of Plant Protection - IPB University (ADAKH, UK, AFAU, PI); Undergraduate Student in Department of Agronomy and Horticulture - IPB University (RAS); Undergraduate Student in Department of Artificial Intelligence - IPB University (FWI); Undergraduate Student in Department of Forest Resources Conservation and Ecotourism - IPB University (FN); Undergraduate Student in Department of Biology - IPB University (ASP, AU); SSRS Indonesia Biodiversity Hub (ASP, AU); Agency of National Park of Gunung Halimun Salak (MMU, MDN, SM).

## IDENTITY

**Scientific Name**
*Orthetrum chrysis* Selys

**Synonym**
*Libellula chrysis* Selys
*Orthetrum sabina*
*Orthetrum galaucum*
*Orthetrum testaceum*
*Orthetrum pruinosum neglectum*
*Orthetrum cancellatum cancellatum*

**Common Name (Indonesia)**
Capung Sambar Perut Kait, Capung Helikopter

**Indonesia Local Name**
Capung ekor merah

## CLASSIFICATION

| | | |
|---|---|---|
| Kingdom | : | Animalia |
| Phylum | : | Arthropoda |
| Class | : | Insecta |
| Order | : | Odonata |
| Family | : | Libellulidae |
| Genus | : | *Orthetrum* |
| Species | : | *Orthetrum Chrysis* |

## DESCRIPTION

*Orthetrum chrysis* has a total body length of approximately 48 mm. The thorax length measures about 13 mm, while the abdomen length is approximately 29 mm. The front wing length is about 35 mm, and the hind wing length is approximately 36 mm. This species exhibits typical characteristics of the family Libellulidae, with large compound eyes that meet at the center of the head and appear blackish red in color. The thorax is blackish red, and the abdomen is distinctly bright red and elongated. The wings are transparent with a slightly darkened appearance, featuring small spots along the upper margin and reddish markings near the wing base. In flight, the wings are extended horizontally, whereas when perched, they are held slightly downward.

## ECOLOGY AND HABITAT

*Orthetrum chrysis* is commonly found across a wide elevation range, from lowland to upland aquatic systems. Field observations show that the dragonfly prefers natural forest areas near water sources, particularly locations that remain undisturbed and are rarely visited by humans (Setyawati *et al*. 2018). These habitats provide the necessary conditions for its life cycle, including access to water for larval development and sun-exposed open areas for adult perching and thermoregulation (Baskoro 2021). In addition, this species is frequently observed in both open and semi-shaded habitats such as ponds, drainage channels, small streams, and even agricultural or plantation areas. Adults typically fly at a low height, moving back and forth while returning to the same perch to maintain their territory (Kartini 2022).

## DISTRIBUTION

### DISTRIBUTION REGION

Regional Distribution in Indonesia (Record)
Sumatera Island, Java Island, Bali Island, West Nusa Tenggara

### Distribution Type

Global

### Distribution Map

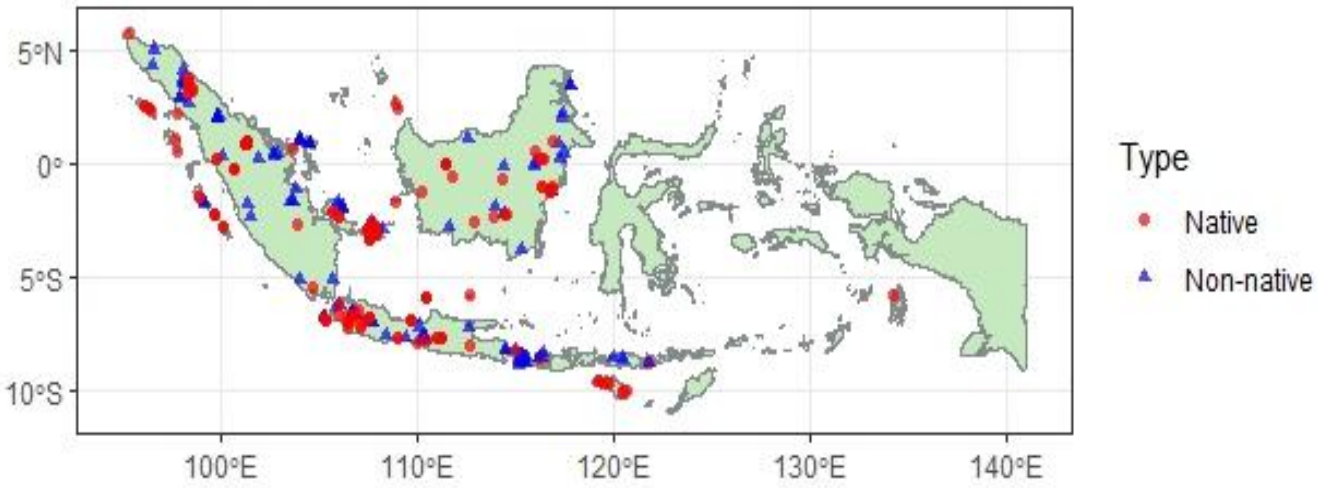



**Figure 1.** Distribution map *Orthetrum chrysis* in Indonesia by GBIF record 2025

Note: The discovery of *Orthetrum chrysis* based on GBIF records in the Aru Islands region (1 record) requires confirmation of the species' taxonomy in site.

### Statistical Overview of Distribution

| Indicator | Bioregion | Value (total, mean ± SD, range) | Unit |
|---|---|---|---|
| Distribution (GBIF on 2025) | Jawa | 72 | Record |
| | Sumatera | 134 | Record |
| | Kalimantan | 49 | Record |
| | Nusa Tenggara | 19 | Record |
| Bioclimatic – Elevation (DEM SRTM) | Jawa | 388,57 ± 442,64 (5 – 1869) | Mean Sea Level (m) |
| | Sumatera | 159,94 ± 377,10 (4 – 2365) | Mean Sea Level (m) |
| | Kalimantan | 82,04 ± 137,98 (3 – 597) | Mean Sea Level (m) |
| | Nusa Tenggara | 525,77 ± 293,36 (189 – 1239) | Mean Sea Level (m) |
| Bioclimatic – Precipitation | Jawa | 388,57 ± 721,65 (2272,13 – 4707,72) | mm / years |
| | Sumatera | 2922,83 ± 396,91 (1805,77 – 4841,59) | mm / years |

| | | | |
|---|---|---|---|
| (CHIRPS UCSB) (2015-2025) | Kalimantan | 3007,25 ± 561,57 (2069,91 – 4175,56) | mm / years |
| | Nusa Tenggara | 2137,35 ± 507,46 (1134,53 – 3399,11) | mm / years |
| Bioclimatic – Temperature (CHIRTS UCSB) (2015-2025) | Jawa | 29,64 ± 2,84 (22,39 – 33,35) | Mean Tmax (°C) |
| | Sumatera | 32,26 ± 1,90 (23,63 – 34,07) | Mean Tmax (°C) |
| | Kalimantan | 31,63 ± 1,02 (27,88 – 32,60) | Mean Tmax (°C) |
| | Nusa Tenggara | 28,96 ± 1,91 (24,47 – 31,21) | Mean Tmax (°C) |

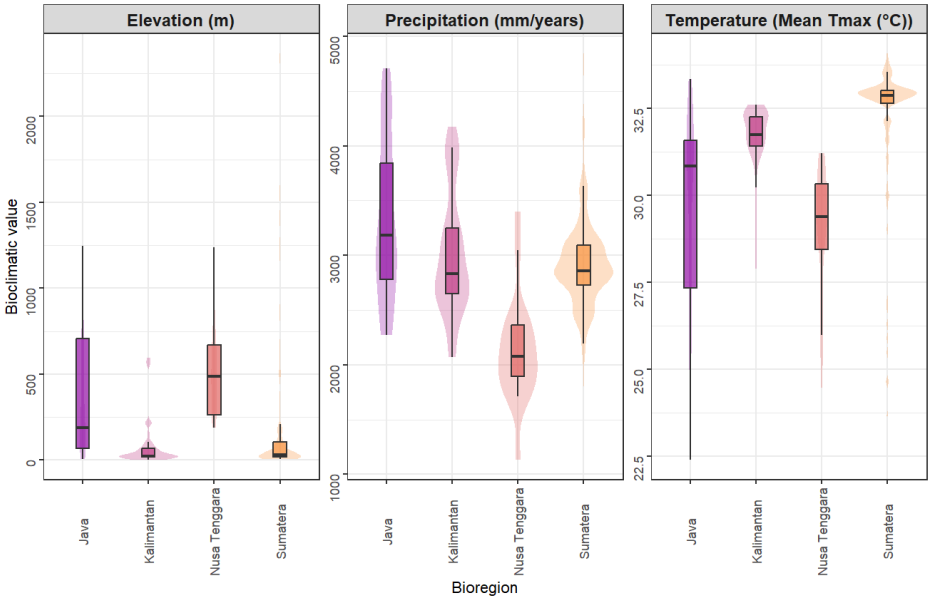



**Figure 2.** Statistical of bioclimatic characteristics

## Distribution Map Based on Indonesia Bioregion – Java

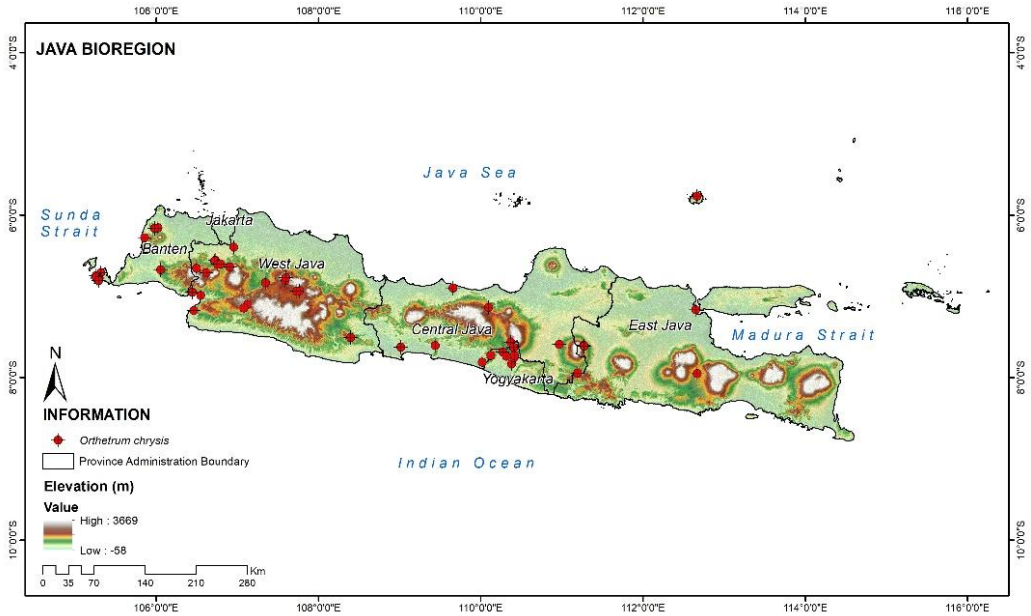



**Figure 3.** Distribution map *Orthetrum chrysis* in Java bioregion by elevation gradient

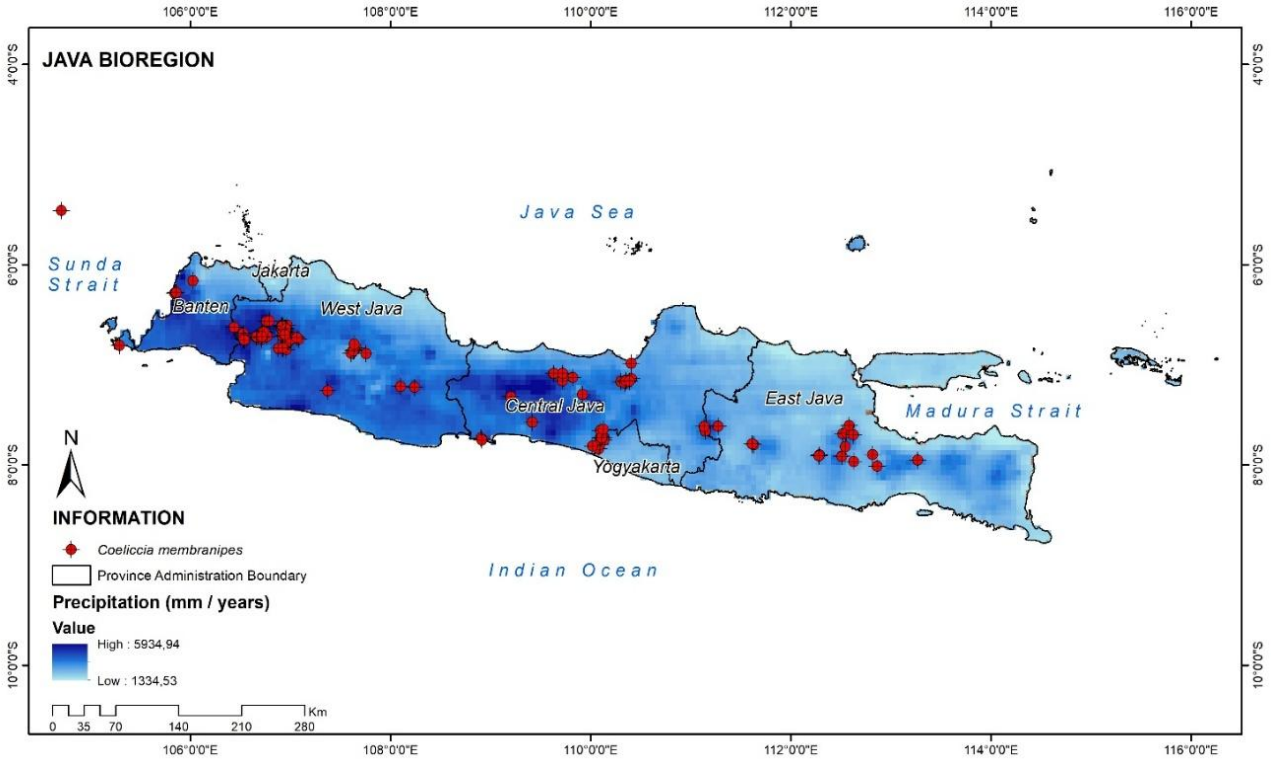



**Figure 4.** Distribution map of *Orthetrum chrysis* in Java bioregion by precipitation gradient

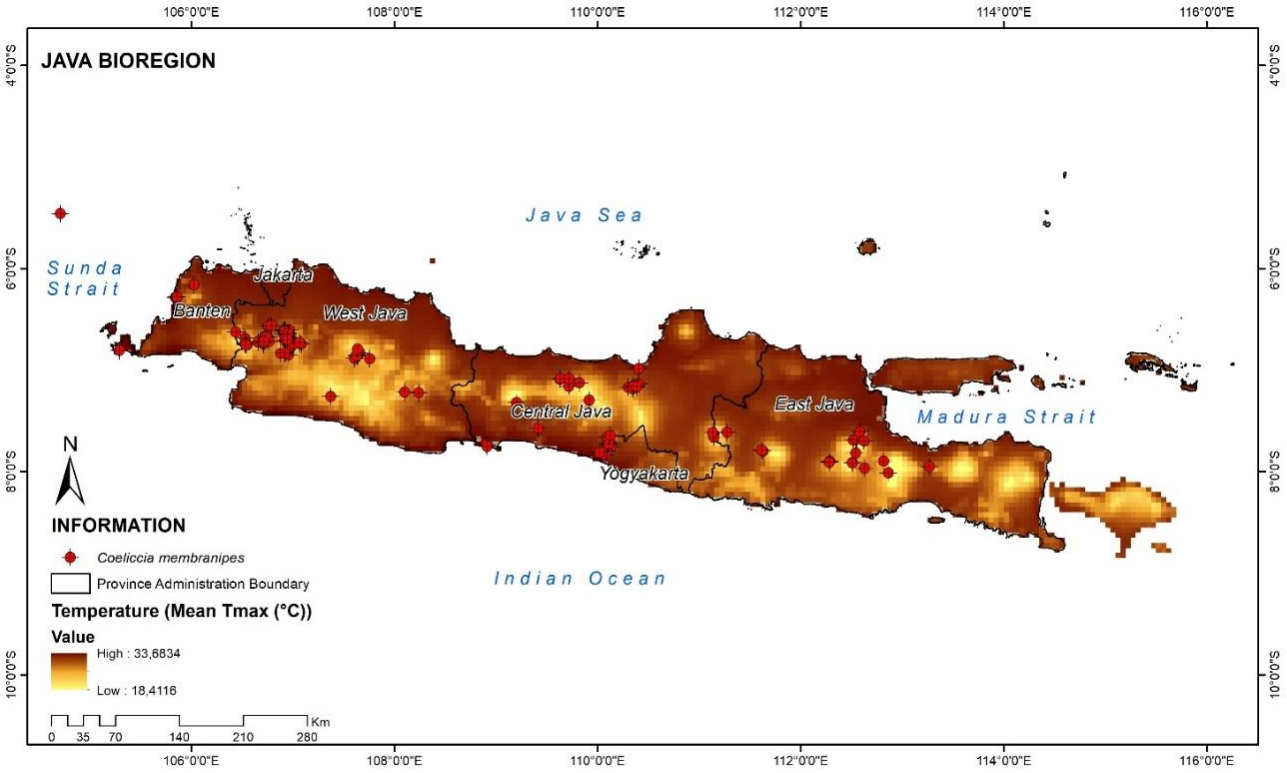



**Figure 5.** Distribution map of *Orthetrum chrysis* in Java bioregion by temperature gradient

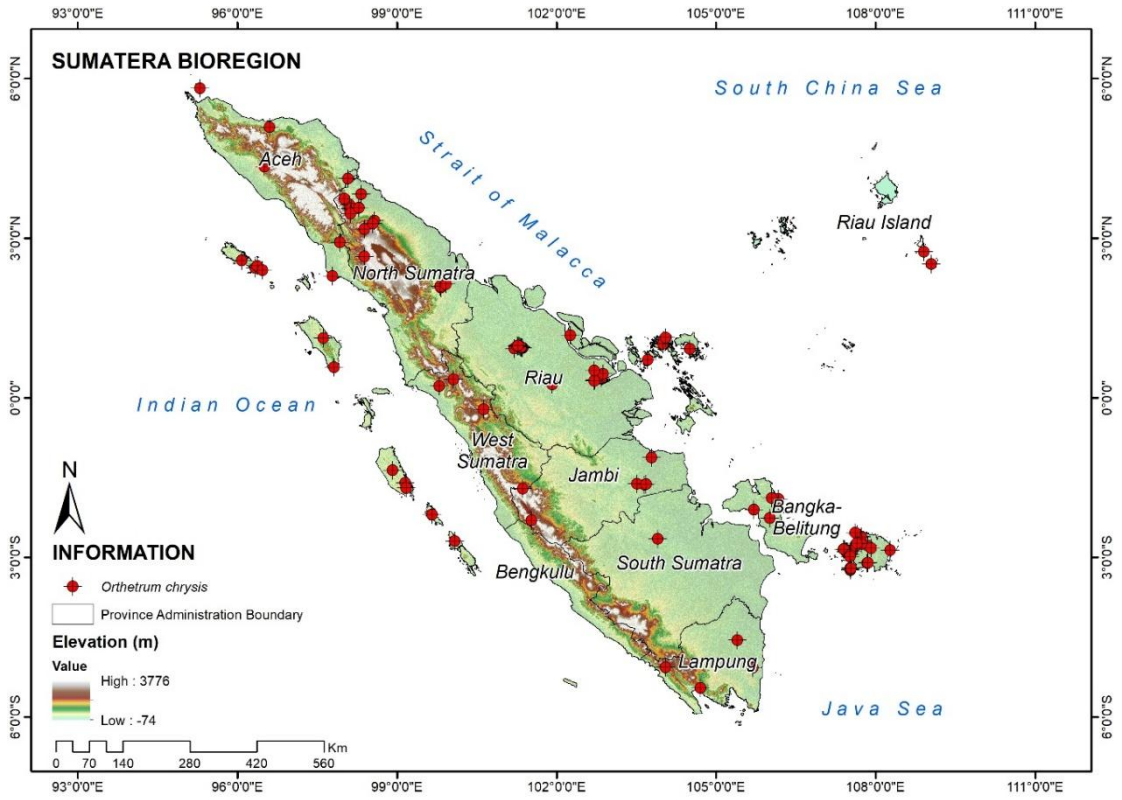



**Figure 6.** Distribution map *Orthetrum chrysis* in Sumatera bioregion by elevation gradient

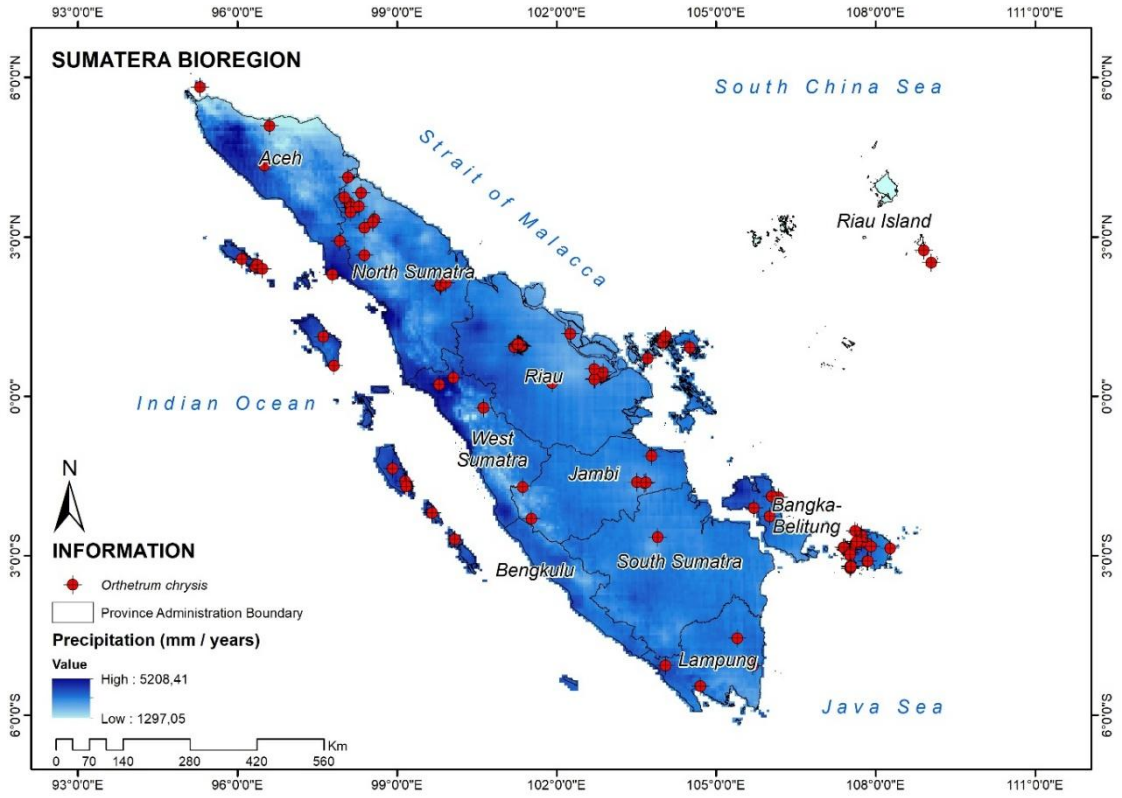



**Figure 7.** Distribution map of *Orthetrum chrysis* in Sumatera bioregion by precipitation gradient

## Distribution Map Based on Indonesia Bioregion – Sumatera

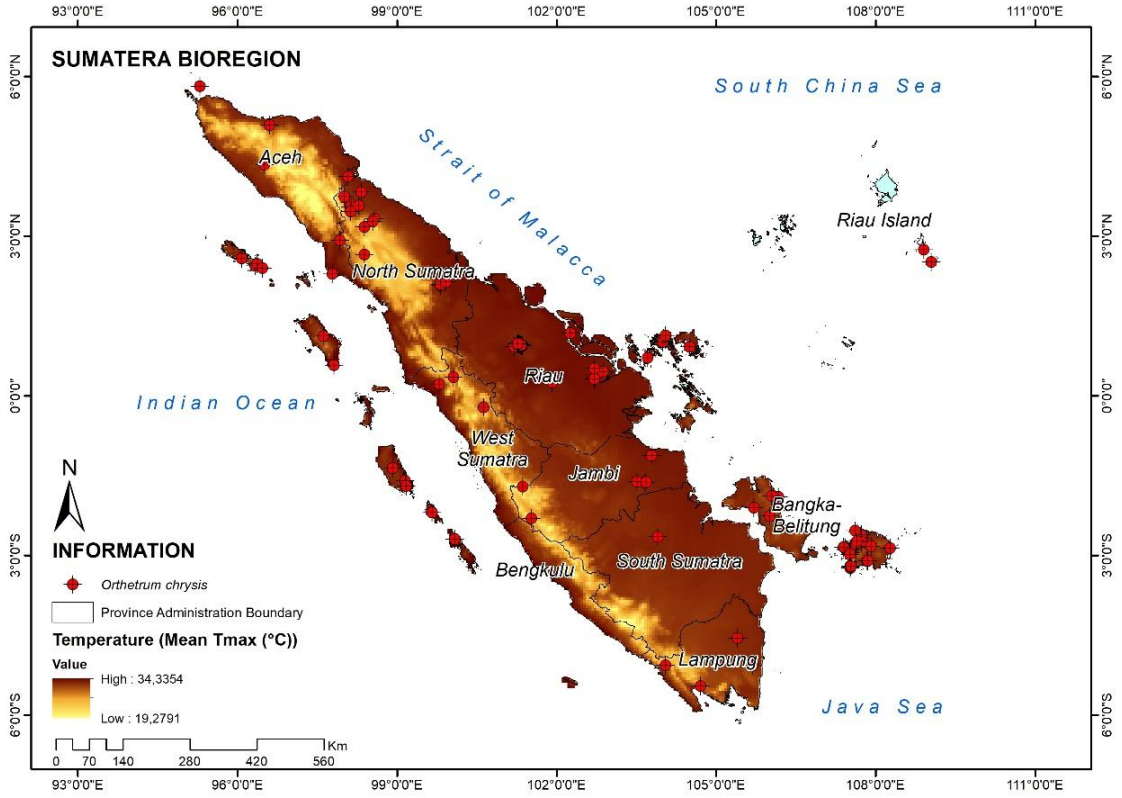



**Figure 8.** Distribution map of *Orthetrum chrysis* in Sumatera bioregion by temperature gradient

## Distribution Map Based on Indonesia Bioregion – Borneo

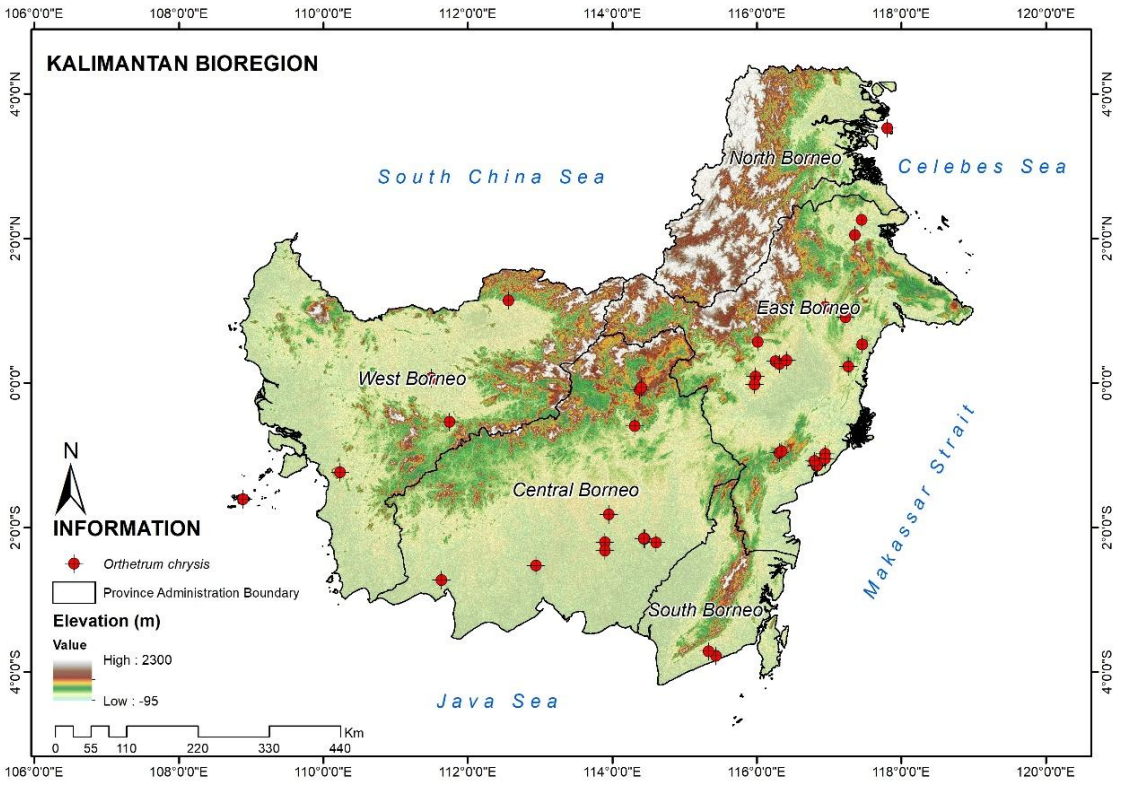



**Figure 9.** Distribution map *Orthetrum chrysis* in Kalimantan bioregion by elevation gradient

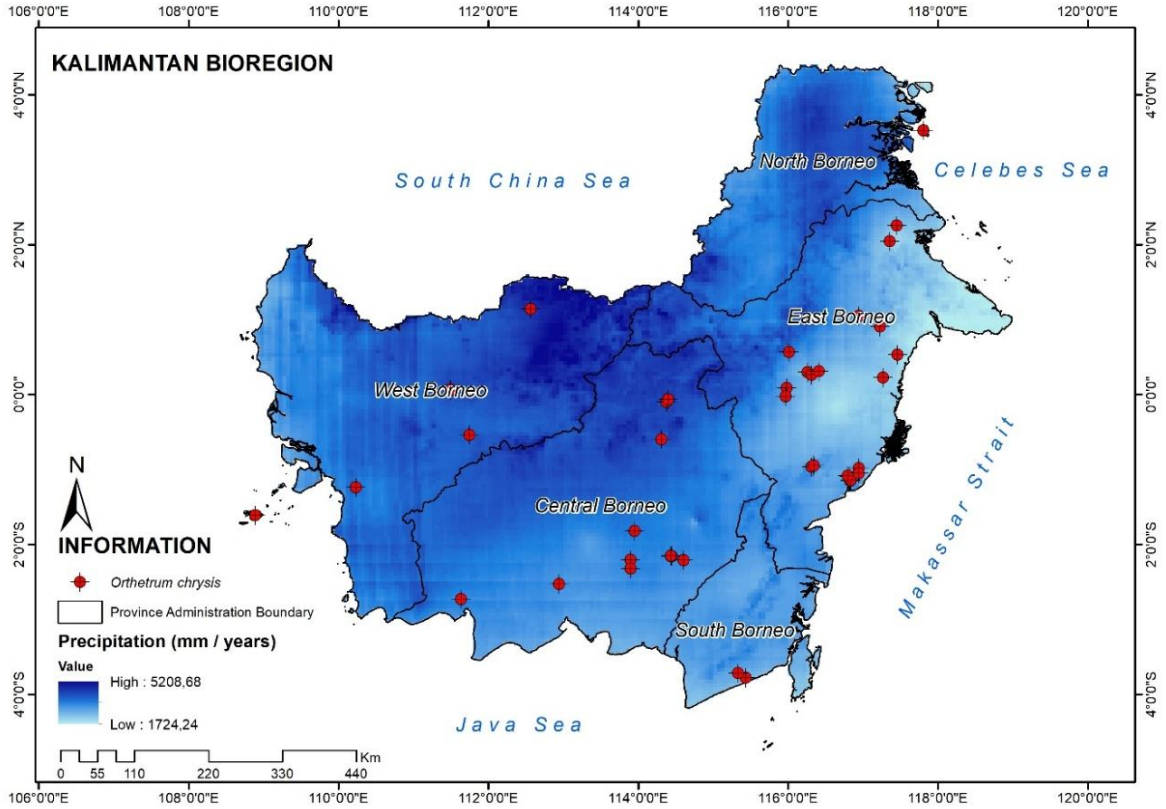



**Figure 10.** Distribution map of *Orthetrum chrysis* in Kalimantan bioregion by precipitation gradient

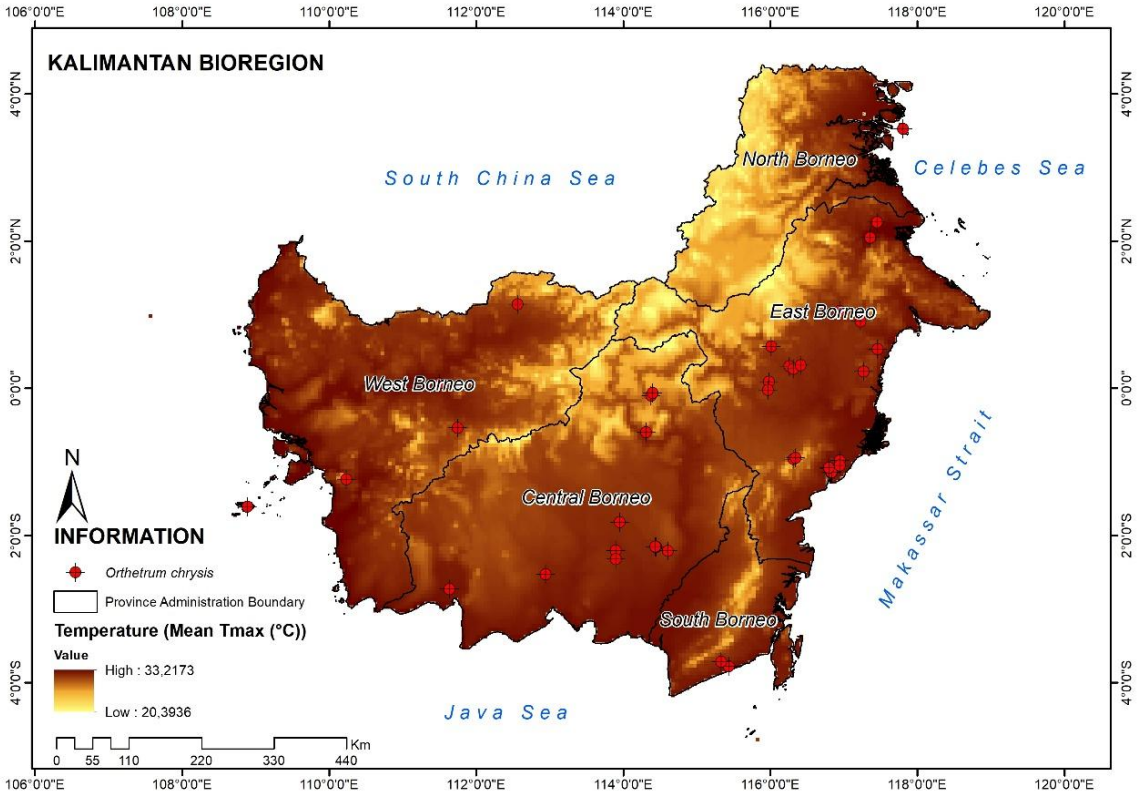



**Figure 11.** Distribution map of *Orthetrum chrysis* in Kalimantan bioregion by temperature gradient

**Distribution Map Based on Indonesia Bioregion – Nusa Tenggara**

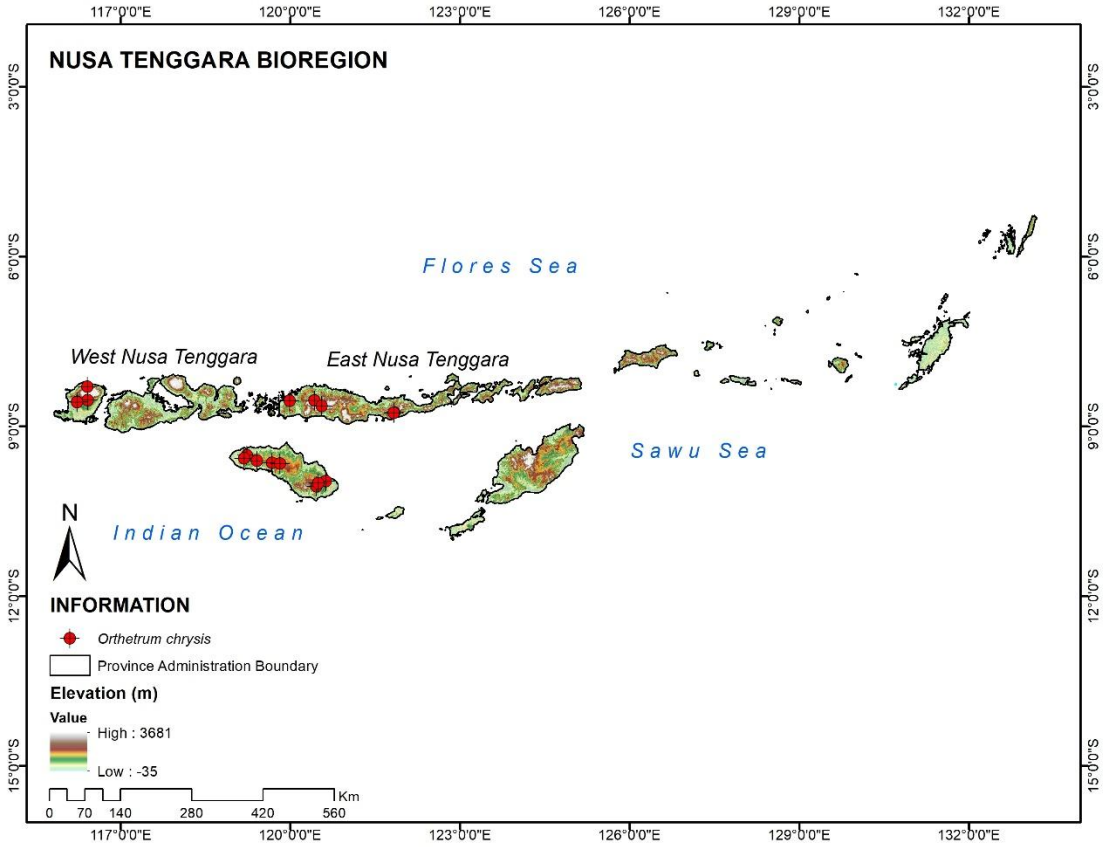



**Figure 12.** Distribution map *Orthetrum chrysis* in Nusa Tenggara bioregion by elevation gradient

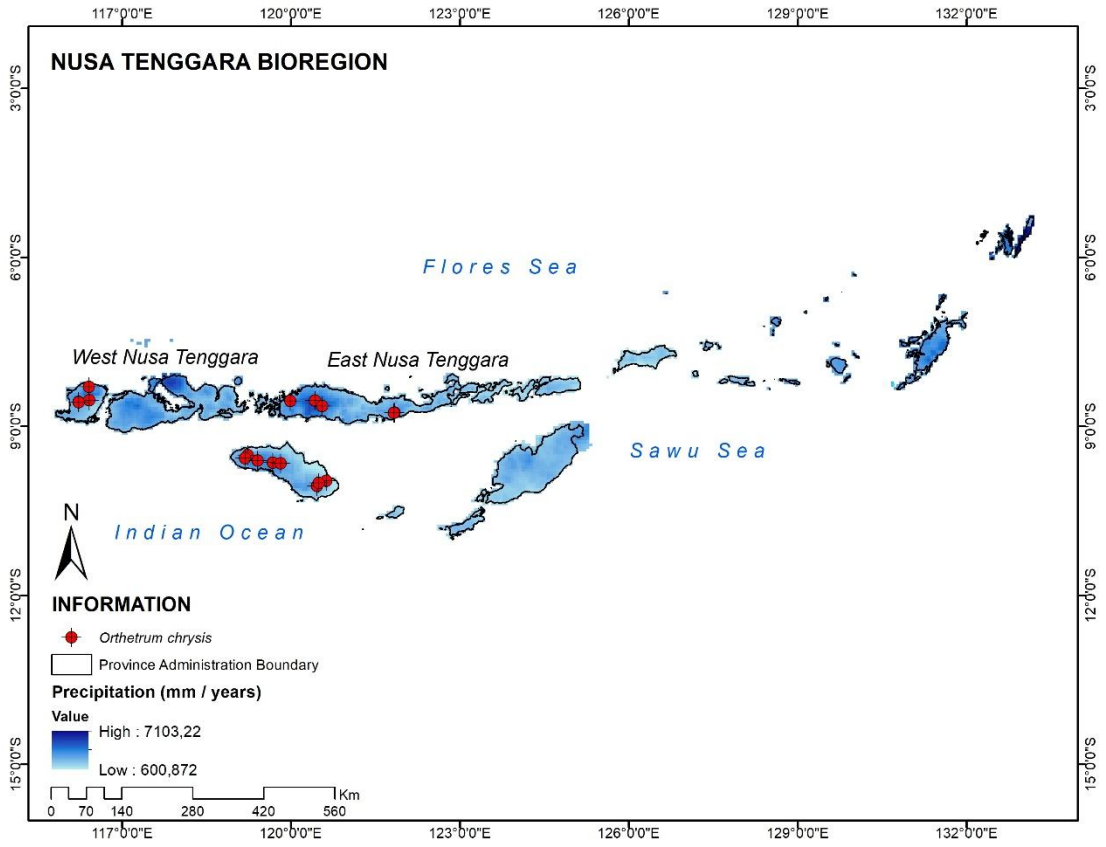



**Figure 13.** Distribution map of *Orthetrum chrysis* in Nusa Tenggara bioregion by precipitation gradient

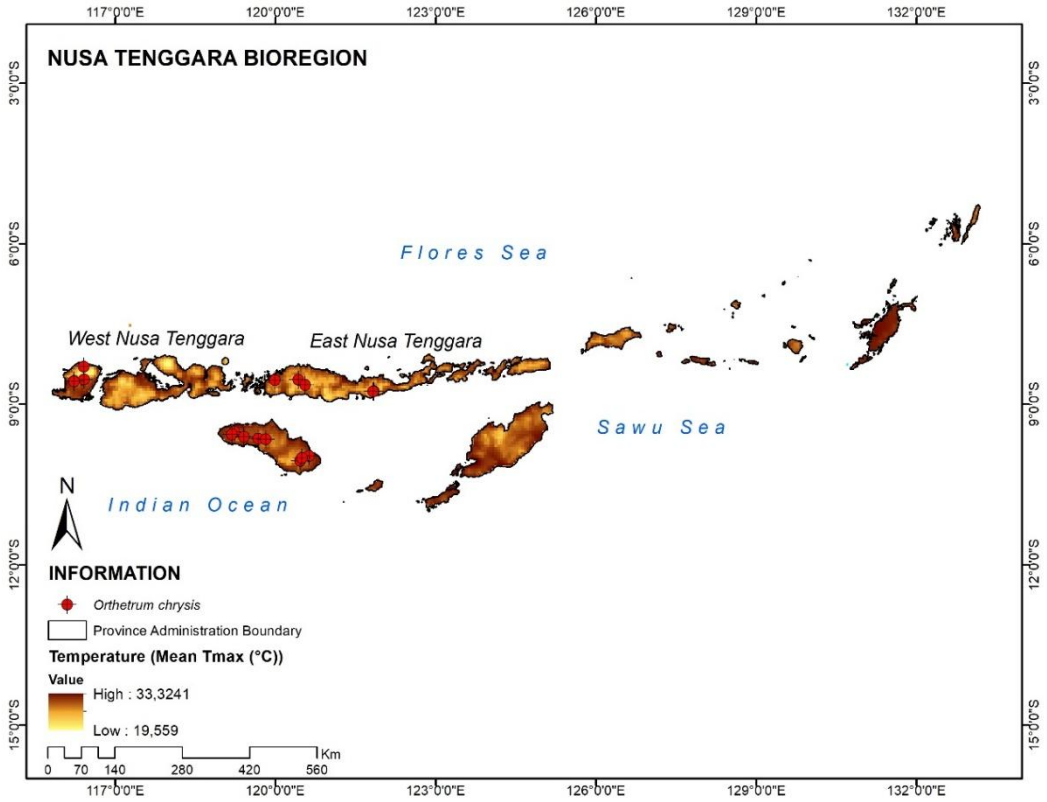



**Figure 14.** Distribution map of *Orthetrum chrysis* in Nusa Tenggara bioregion by temperature gradient

## SPECIES VALUE

### Ecological Value

Dragonflies, including *Orthetrum chrysis*, play an essential ecological role in freshwater ecosystems as effective natural predators (Ridwan and Pamungkas 2015). From the moment they hatch, dragonflies are carnivorous; their aquatic nymphs prey on plankton, mosquito larvae, small fish, and other aquatic invertebrates, while adults hunt flying insects such as mosquitoes, flies, and various agricultural pests. Because of this predatory nature, dragonflies help maintain ecological balance and contribute to natural pest suppression, making them valuable agents of biological control (Ramlee *et al.* 2022). In addition, dragonflies are recognized as bioindicators of water quality, changes or declines in their population can reflect disturbances or degradation in aquatic habitats and environmental health (Kartini *et al.* 2022). Thus, the high sensitivity of dragonflies to habitat changes, combined with their role across both aquatic and terrestrial food webs, highlights their importance for ecosystem monitoring and conservation.

### Economic Value

Dragonfly nymphs, including the species Orthetrum chrysis, feed on mosquito larvae. During the imago phase, dragonflies can become predators of rice pests (Sumarni 2018). Therefore, dragonflies serve as disease and pest controllers (Dharmawan *et al*. 2022), which indirectly reduce the risk of outbreaks, reduce the need for pesticides, improve health cost efficiency, reduce the need for pesticides, and increase agricultural yields.

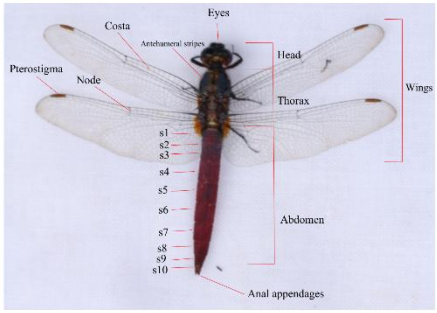
### Socio-Cultural Value

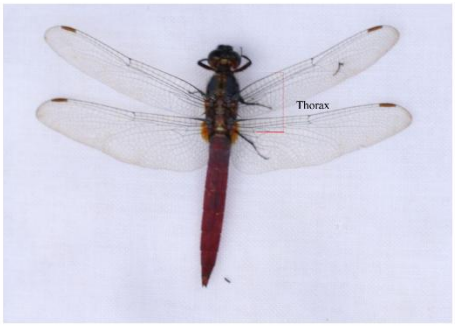
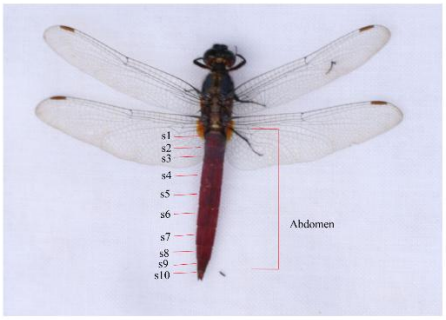
Not identified

## THREATS

Agriculture

## DOCUMENTATION

| Picture | Title | Caption |
|---|---|---|
|  | Dorsal view | *Orthetrum chrysis*, in Gunung Halimun Salak National Park (Cikaniki), Desa Malasari Kec. Nanggung, Kab. Bogor, Jawa Barat, 26 Oktober 2025 |
|  | Habitat | *Orthetrum chrysis*, in Gunung Halimun Salak National Park (Cikaniki), Desa Malasari Kec. Nanggung, Kab. Bogor, Jawa Barat, 26 Oktober 2025 |
|  | Morphology | Total body length: 48 mm |
|  | Wings | Front wing length: 35 mm<br>Back wing length: 36 mm |

| | | |
|---|---|---|
|  | Thorax | Thorax length: 13 mm |
|  | Abdomen | Abdomen length: 29 mm |

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