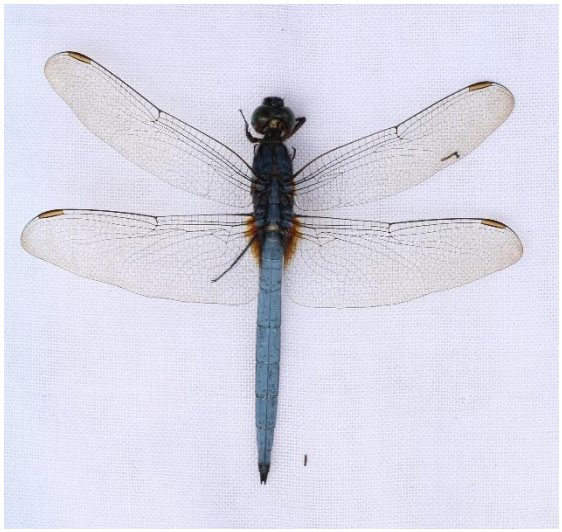
SSRS INABIODIV
SPECIES PROFILE AND INFORMATION
Data is from direct observation and review on recent research paper
Vol 2: No. 0006 (Version 25 February 2026)

Online Profile

Orthetrum glaucum



(Blue Marsh Hawk)

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

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CONSERVATION STATUS

IUCN RedList
Least Concern (2007)

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, Brunei Darussalam, China, Hong Kong, India, Japan, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Province of China, Thailand, Viet Nam

OVERVIEW

Orthetrum glaucum is a dragonfly species from the family Libellulidae commonly found in tropical regions of Asia, including Indonesia. It inhabits various aquatic and semi-aquatic environments such as rice fields, swamps, and forest edges. The species has important ecological value as a natural predator and bioindicator of water quality, and it also provides indirect economic benefits through its role in biological pest control and potential in ecotourism activities.

Citation
Khotimah U, Umayana AFA, Izzati FW, Ithriyatina P, Nurhuda F, Putri AS, Hidayah ADK, Ulfa A, Ulum MM, Noronhae MD, Mercusiana S. 2026. Indonesia Species Profile of Orthetrum glaucum (Odonata: Libellulidae). *SSRS INABIODIV Species Profile and Information*. Vol. 2: No. 0006. https://publishing.ssrs.or.id/ojs/index.php/ssrs-inabiodiv

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IDENTITY

Scientific Name
Orthetrum glaucum (Brauer, 1865)

Synonym
Orthetrum caledonicum (Brauer, 1865)
Orthetrum chrysis (Selys, 1891)
Orthetrum luzonicum (Brauer, 1868)
Orthetrum Newman, 1833
Orthetrum pruinosum (Burmeister, 1839)
Orthetrum sabina (Drury, 1773)
Orthetrum schneideri Förster, 1903
Orthetrum serapia Watson, 1984
Orthetrum testaceum (Burmeister, 1839)
Orthetrum triangulare (Selys, 1878)
Orthetrum villosovittatum (Brauer, 1868)

Common Name (Indonesia)
Capung Besar

Indonesia Local Name
Not Indentified

CLASSIFICATION

Kingdom	:	Animalia
Division	:	Arthropoda
Class	:	Insecta
Order	:	Odonata
Family	:	Libellulidae
Genus	:	*Orthetrum*
Species	:	*Orthetrum glaucum* (Brauer, 1865)

DESCRIPTION

Orthetrum glaucum is a medium-sized dragonfly characterized by its overall bluish-grey appearance, often partially covered with a fine whitish pruinescence. The wings are transparent with dark venation, and the wing bases show yellowish-brown to dark brown shading. The species typically reaches a total body length of about 4,8 cm, with an abdomen length of 3,2 cm and a hindwing length of approximately 3,8 cm. Male individuals exhibit a distinctive greyish-blue coloration, accompanied by a thin layer of white pruinescence that becomes more visible with maturity. Their compound eyes appear bluish-brown. In contrast, females are dominated by earthy yellow-brown tones, giving them a more cryptic appearance (Kartini et al. 2022). The abdomen commonly measures around 29 mm, while the hindwing extends to about 36 mm. The basal part of the wings often displays a gradient shading from brown to a darker hue (Prayoga 2024).

ECOLOGY AND HABITAT

Orthetrum glaucum can be found in various types of habitats, both in lowland and highland areas (Setyawati et al. 2017). This dragonfly generally prefers natural habitats such as dense forests, swamps, rice fields, grasslands, open areas, and regions close to water sources (Dharmawan et al.

2022; Ali et al. 2025). Its presence is often recorded in tropical rainforest ecosystems at an altitude of around 570 meters above sea level (Rohman et al. 2024), and high species diversity has also been observed at elevations ranging from 400 to 1200 meters (Leksono et al. 2017). These findings indicate that *O. glaucum* possesses strong adaptability to various environmental conditions, particularly in areas with sufficient water availability and vegetation that supports its reproductive activities

DISTRIBUTION

Distribution Region
Regional Distribution in Indonesia,
Kalimantan, Sumatera, Bali, Sulawesi, Papua, Jawa, Nusa Tenggara, Maluku

Distribution Type
Global

Distribution Map

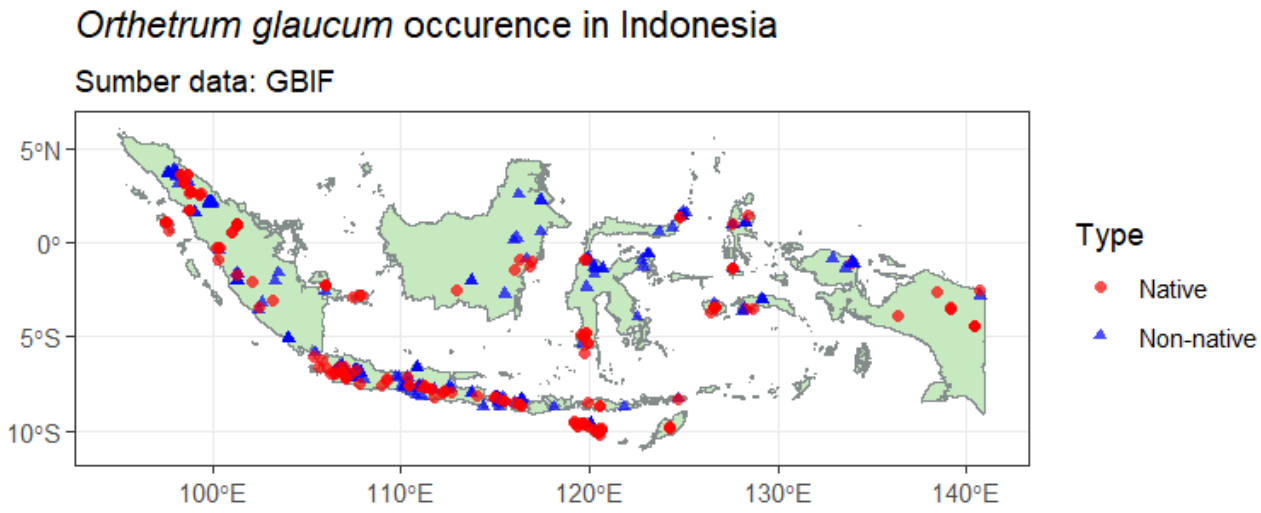


Figure 1. Distribution map *Orthetrum glaucum* in Indonesia

Statistical Overview of Distribution

Indicator	Bioregion	Value (total, mean ± SD, range)	Unit
Distribution (GBIF on 2025)	Sumatera	126	Record
	Jawa	136	Record
	Kalimantan	18	Record
	Sulawesi	58	Record
	Maluku	25	Record
	Nusa Tenggara	59	Record
	Papua	27	Record

Bioclimatic – Elevation (DEM SRTM)	Sumatera	455,17 ± 551 (5 - 3759)	Mean Sea Level (m)
	Jawa	854,31 ± 523,71 (9 - 3326)	Mean Sea Level (m)
	Kalimantan	184,94 ± 187,79 (6 -592)	Mean Sea Level (m)
	Sulawesi	510,46 ± 300,39 (20 - 1239)	Mean Sea Level (m)
	Maluku	417,96 ± 380,12 (9 -1029)	Mean Sea Level (m)
	Nusa Tenggara	510,46 ± 300,39 (20 - 1239)	Mean Sea Level (m)
	Papua	937 ± 524,49 (10 - 1772)	Mean Sea Level (m)
Bioclimatic – Precipitation (CHIRPS UCSB) (2015-2025)	Sumatera	2775,09 ± 352,98 (1561,18 – 3913,82)	mm / years
	Jawa	3187 ± 679,26 (1879,17 – 5301,07)	mm / years
	Kalimantan	2954,03 ± 532,46 (2188,28 – 3937,74)	mm / years
	Sulawesi	1963,46 ± 439,92 (933,53 – 3399,117)	mm / years
	Maluku	3316,07 ± 1123,76 (1844,22 – 6093,03)	mm / years
	Nusa Tenggara	1963 ± 439,92 (933,53 – 3399,11)	mm / years
	Papua	3870,57 ± 382,48 (1698,65 – 3870,57)	mm / years
Bioclimatic – Temperature (CHIRTS UCSB) (2015-2025)	Sumatera	30,39 ± 2,83 (22,40 – 34,10)	Mean Tmax (°C)
	Jawa	26,68 ± 2,71 (19,75 – 32,99)	Mean Tmax (°C)
	Kalimantan	30,94 ± 1,52 (27,61 – 32,54)	Mean Tmax (°C)
	Sulawesi	28,81 ± 1,87 (24,47 – 31,97)	Mean Tmax (°C)
	Maluku	30,13 ± 1,77(26,07 – 32,40)	Mean Tmax (°C)
	Nusa Tenggara	28,81 ± 1,87 (24,47 – 31,97)	Mean Tmax (°C)
	Papua	26,73 ± 2,27 (24,52 – 31,38)	Mean Tmax (°C)

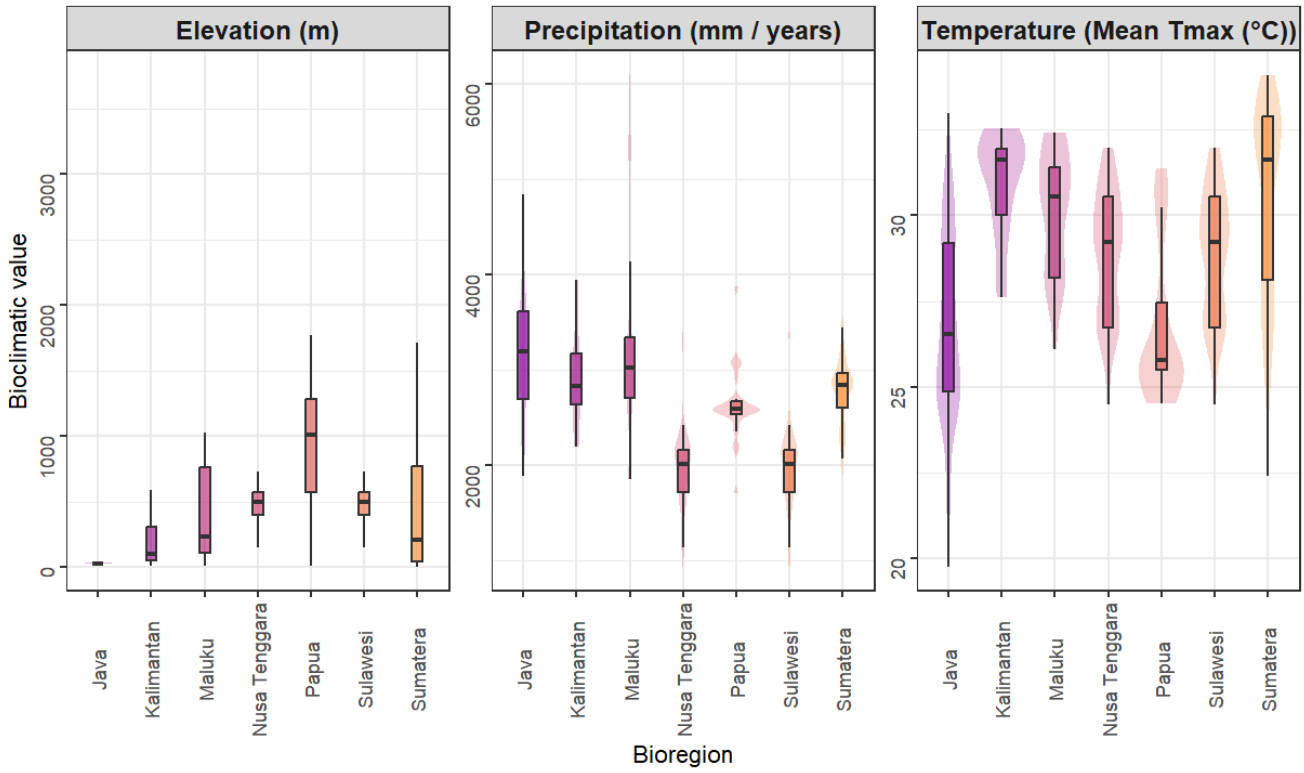


Figure 2. Statistical of bioclimatic characteristics

Distribution Map Based on Indonesia Bioregion – Java

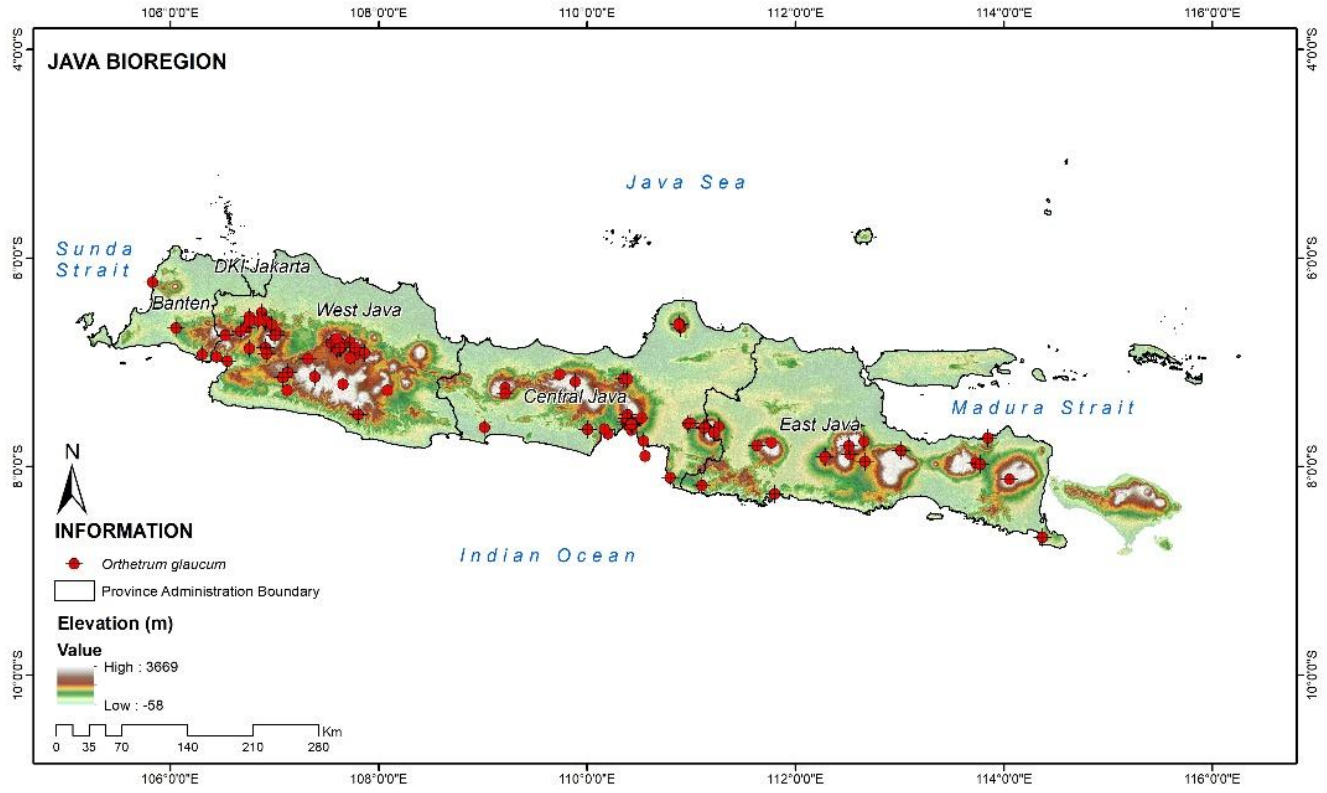


Figure 3. Distribution map of *Orthetrum glaucum* in Java bioregion by elevation gradient by elevation gradient

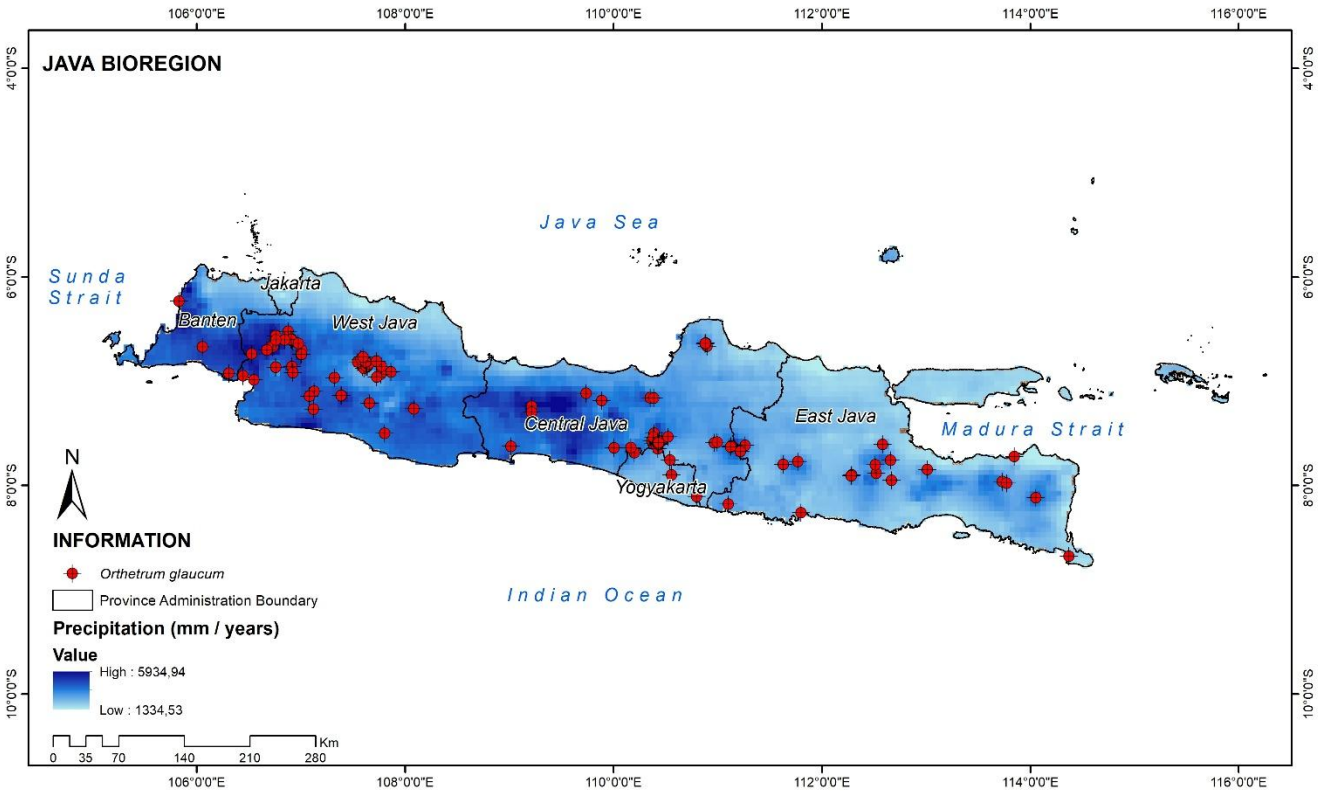


Figure 4. Distribution map of *Orthetrum glaucum* in Java bioregion by precipitation gradient

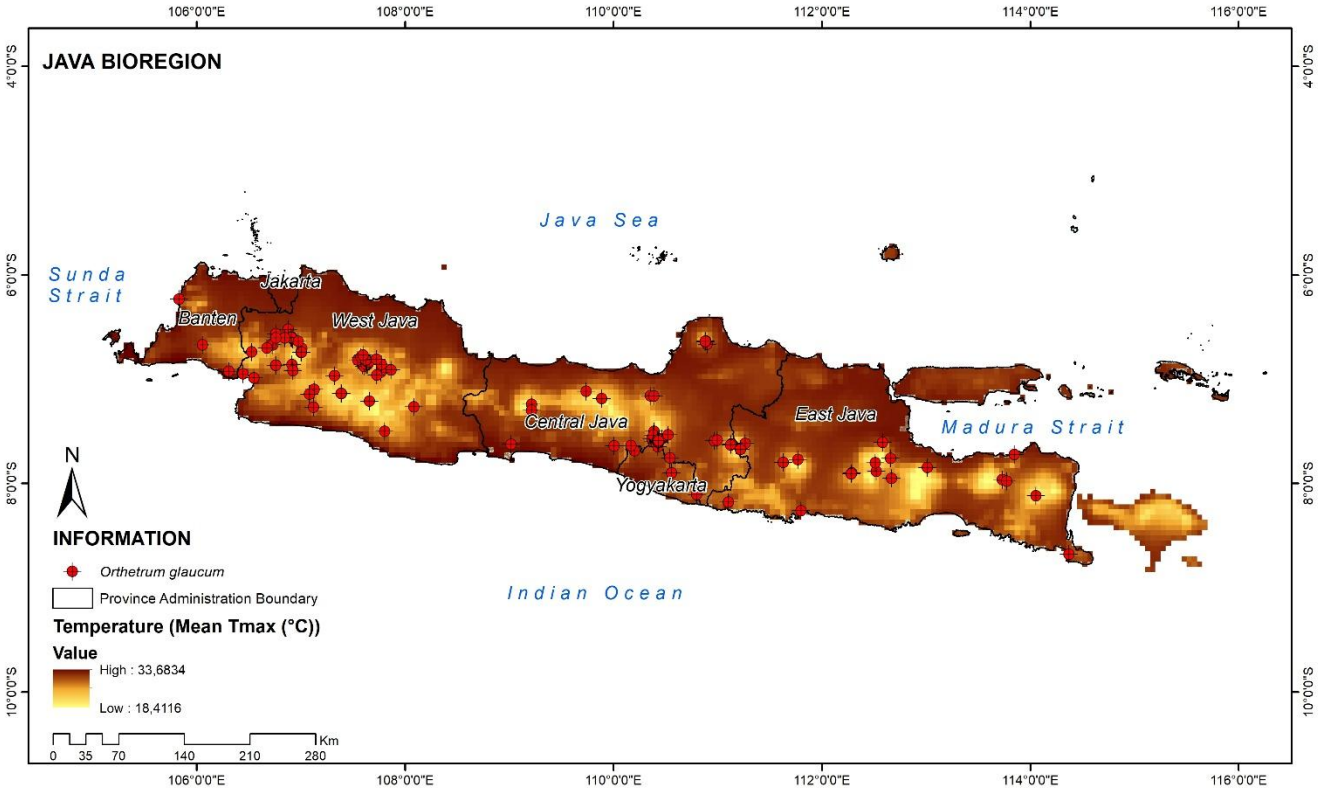


Figure 5. Distribution map of *Orthetrum glaucum* in Java bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Sumatera

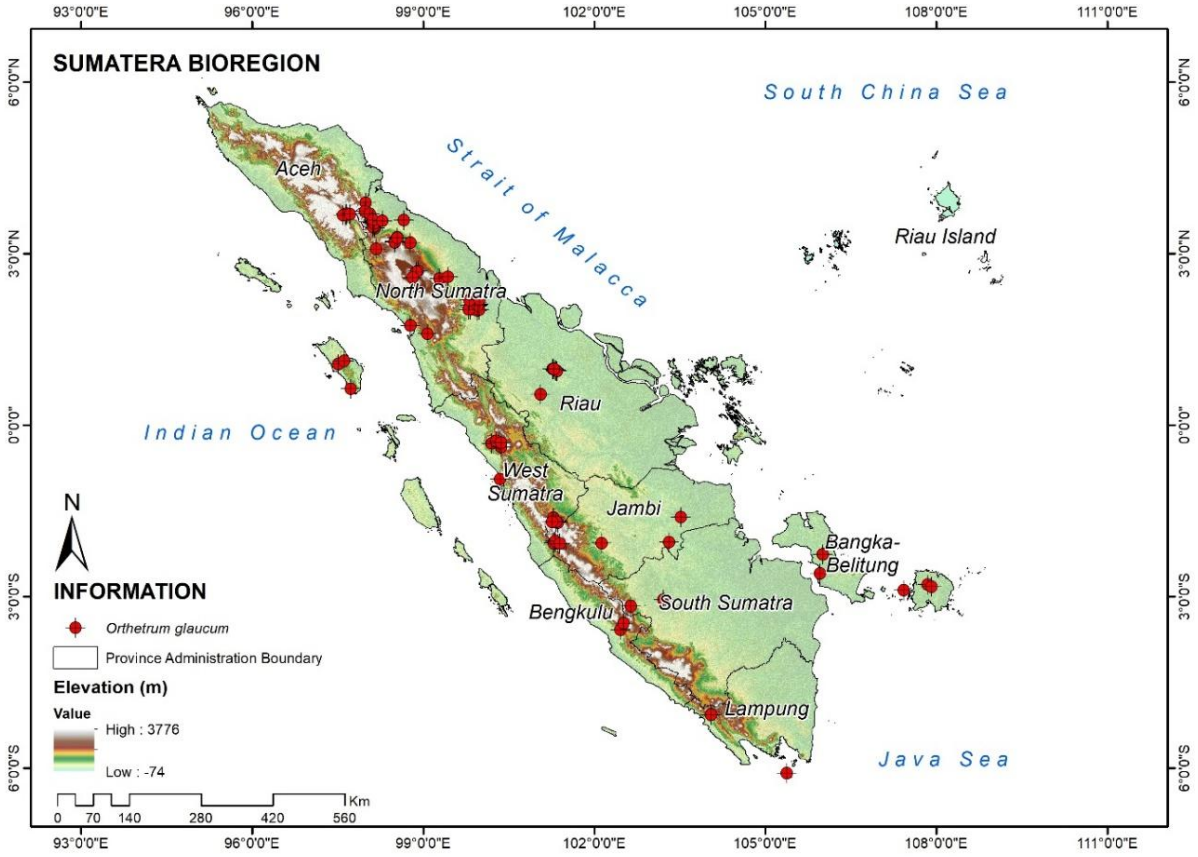


Figure 6. Distribution map *Orthetrum glaucum* in Sumatera bioregion by elevation gradient

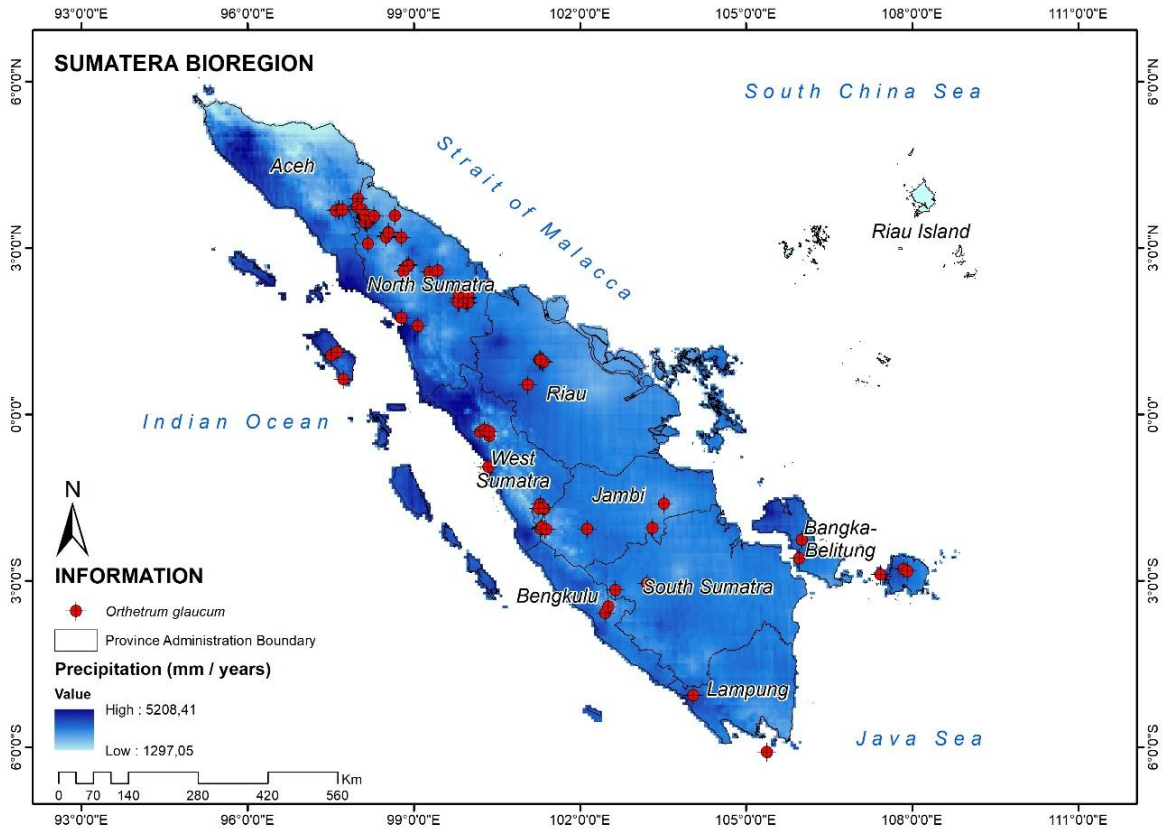


Figure 7. Distribution map of *Orthetrum glaucum* in Sumatera bioregion by precipitation gradient

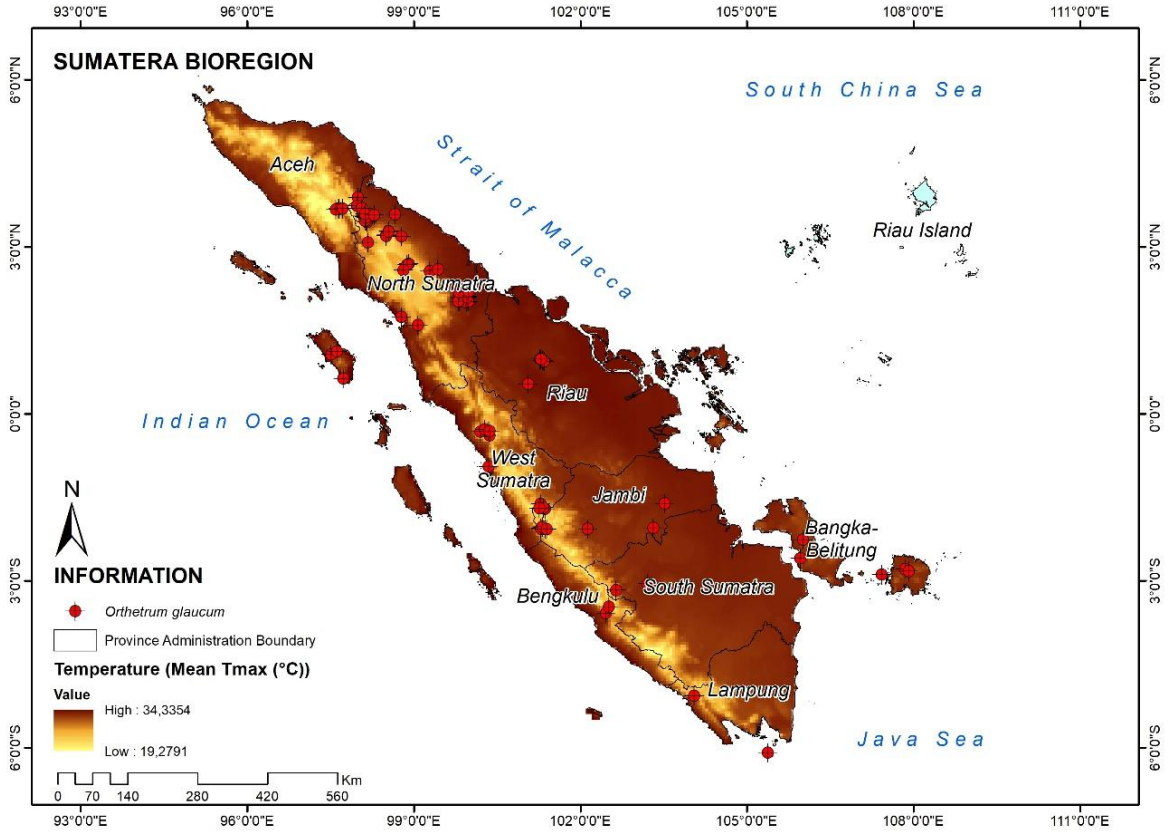


Figure 8. Distribution map of *Orthetrum glaucum* in Sumatera bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Kalimantan

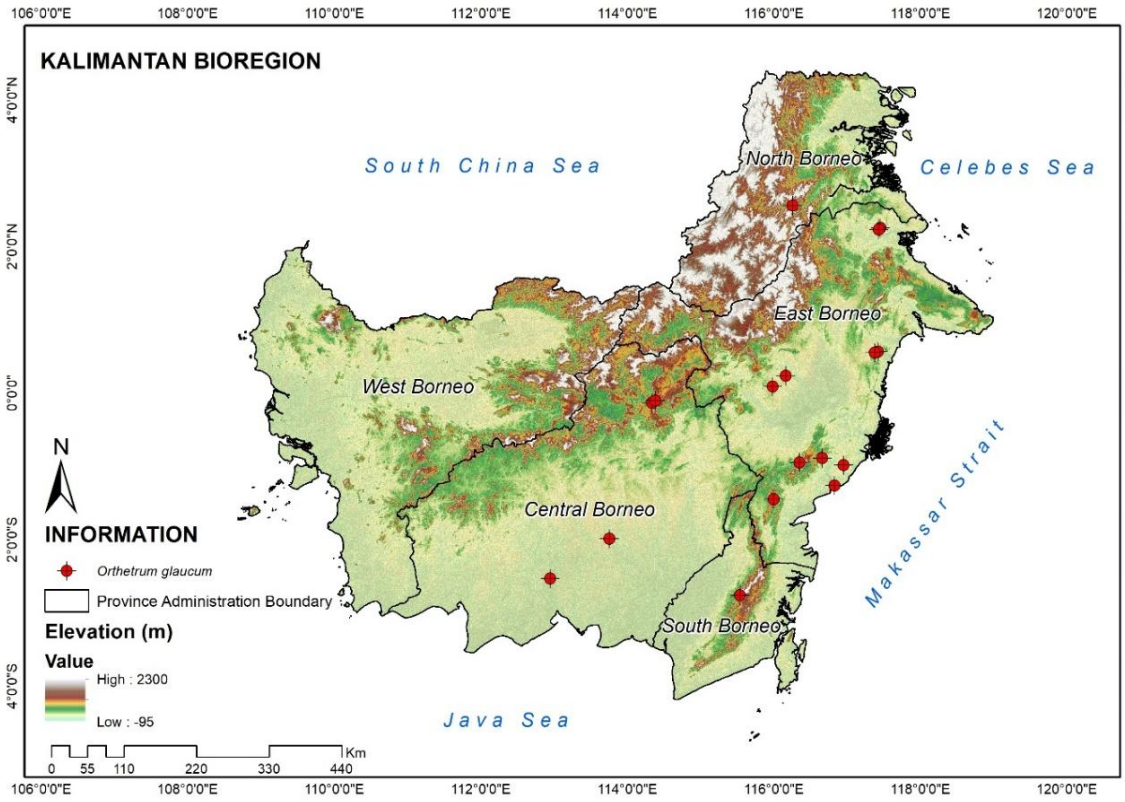


Figure 9. Distribution map *Orthetrum glaucum* in Kalimantan bioregion by elevation gradient

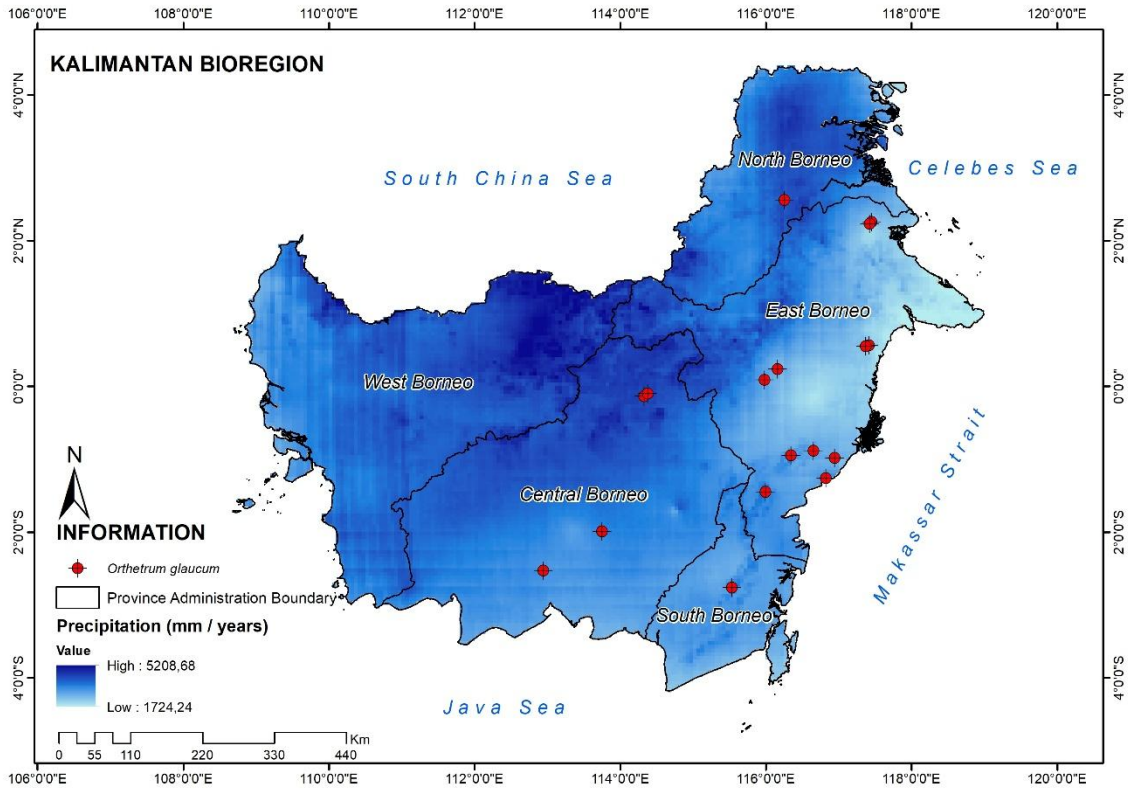


Figure 10. Distribution map of *Orthetrum glaucum* in Kalimantan bioregion by precipitation gradient

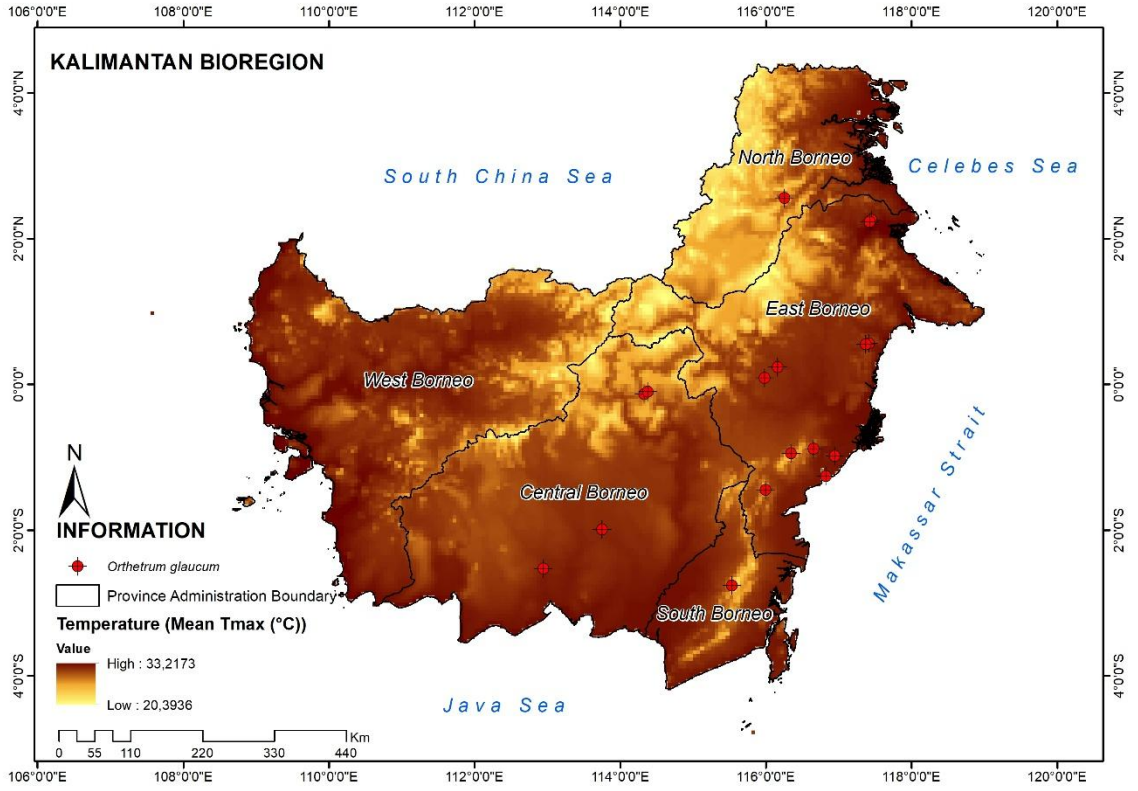


Figure 11. Distribution map of *Orthetrum glaucum* in Kalimantan bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Sulawesi

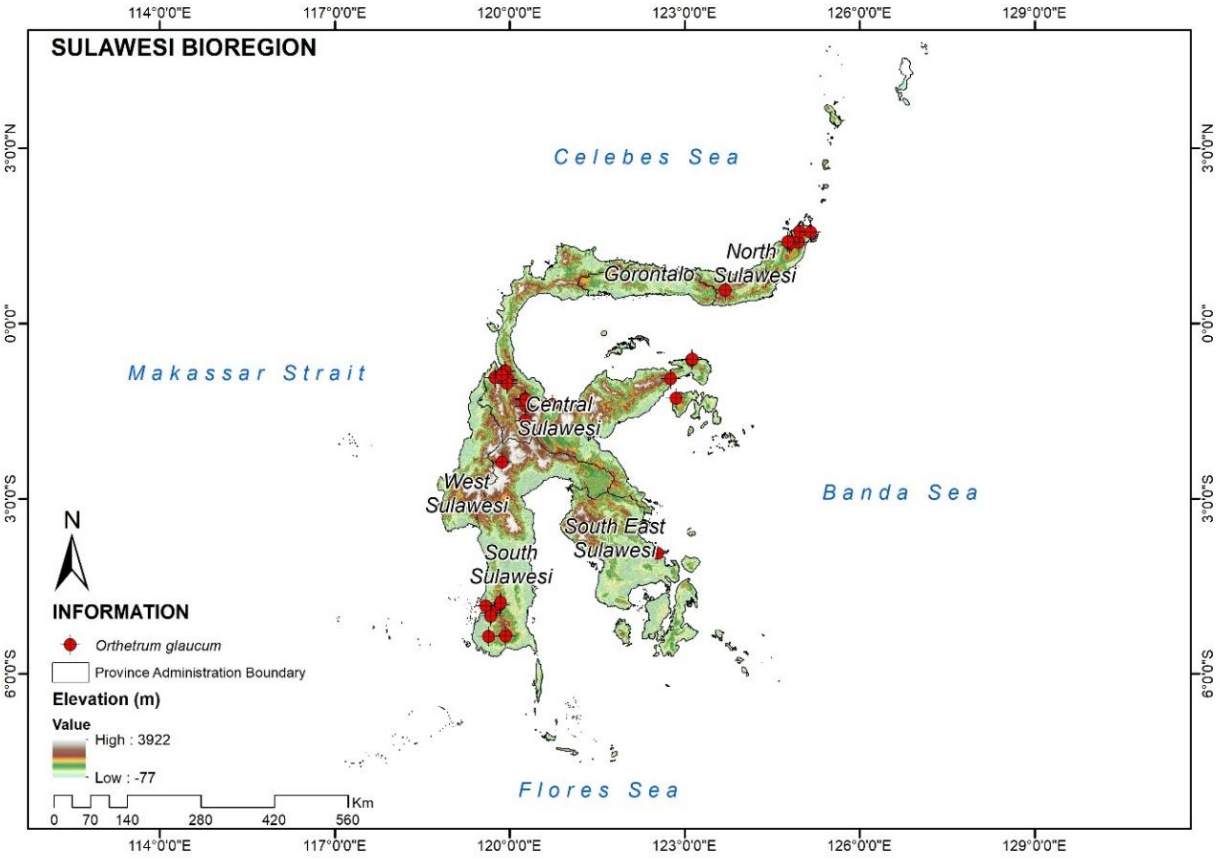


Figure 12. Distribution map *Orthetrum glaucum* in Sulawesi bioregion by elevation gradient

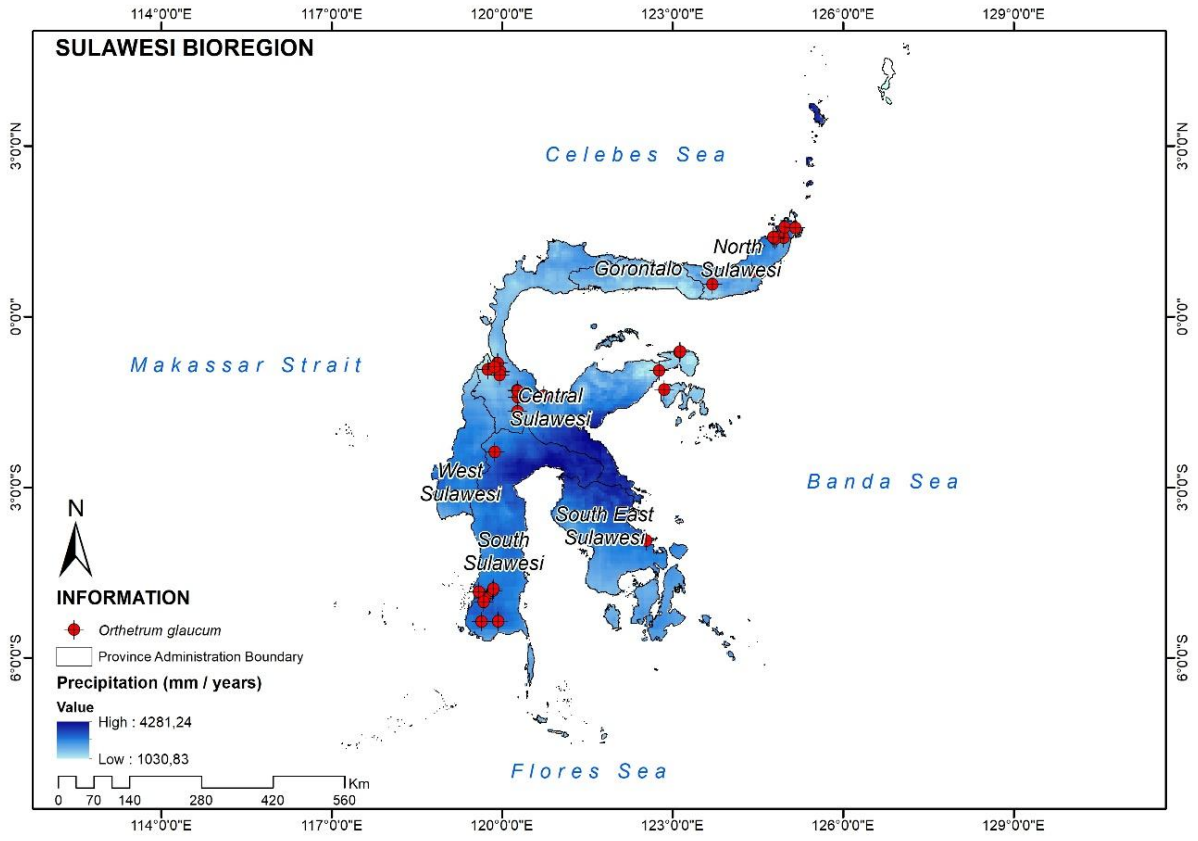


Figure 13. Distribution map of *Orthetrum glaucum* in Sulawesi bioregion by precipitation gradient

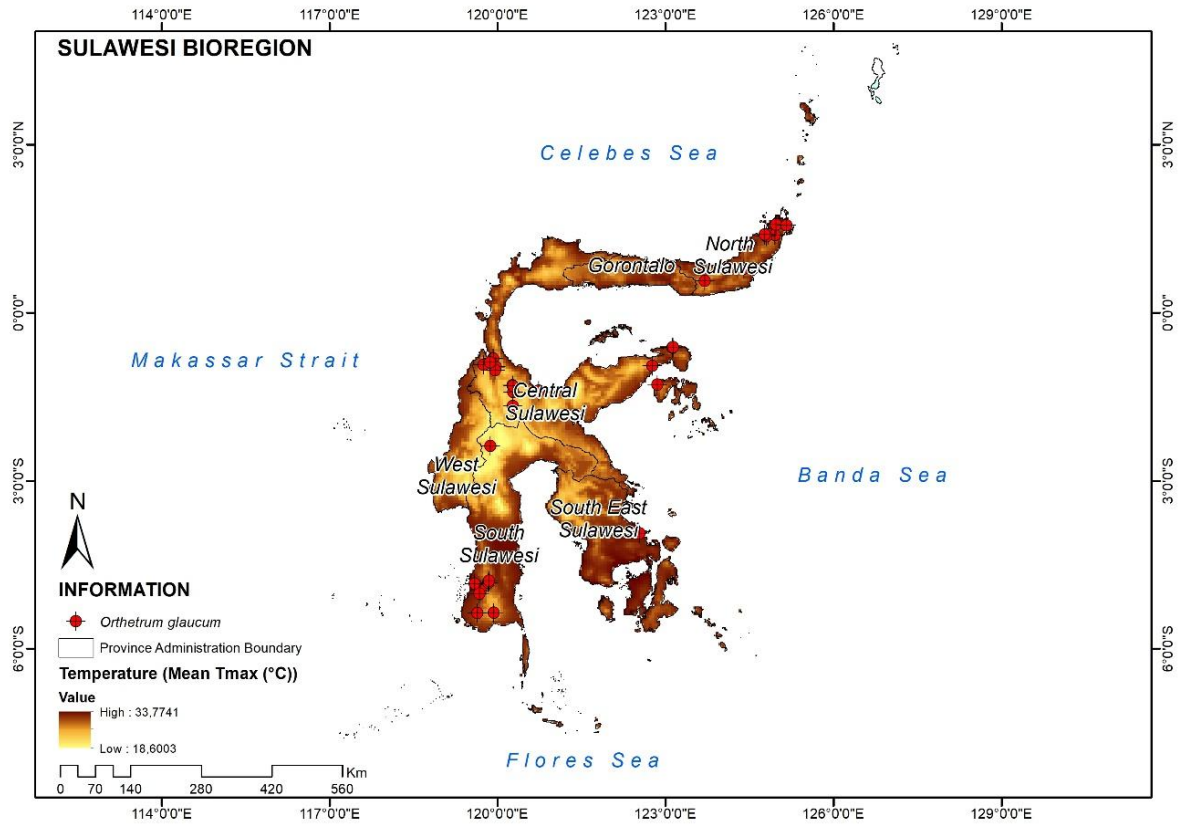


Figure 14. Distribution map of *Orthetrum glaucum* in Sulawesi bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Maluku

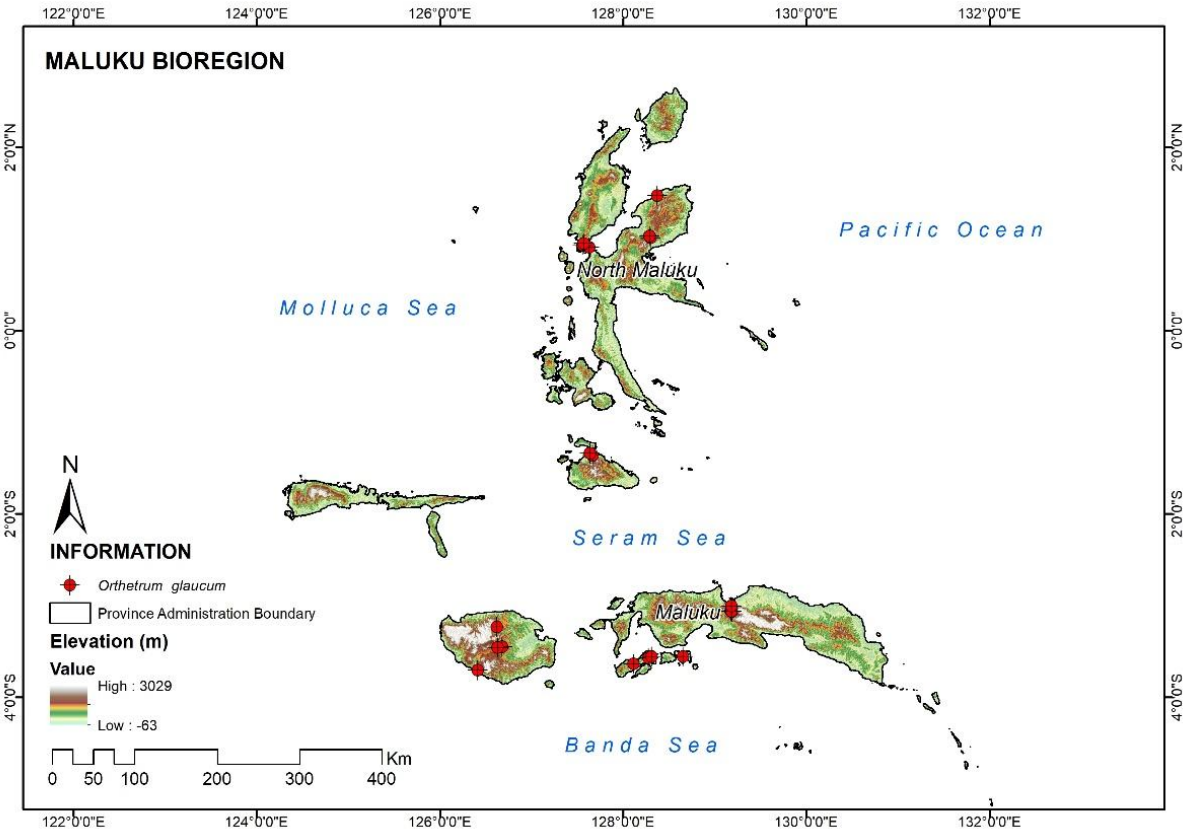


Figure 15. Distribution map *Orthetrum glaucum* in Maluku bioregion by elevation gradient

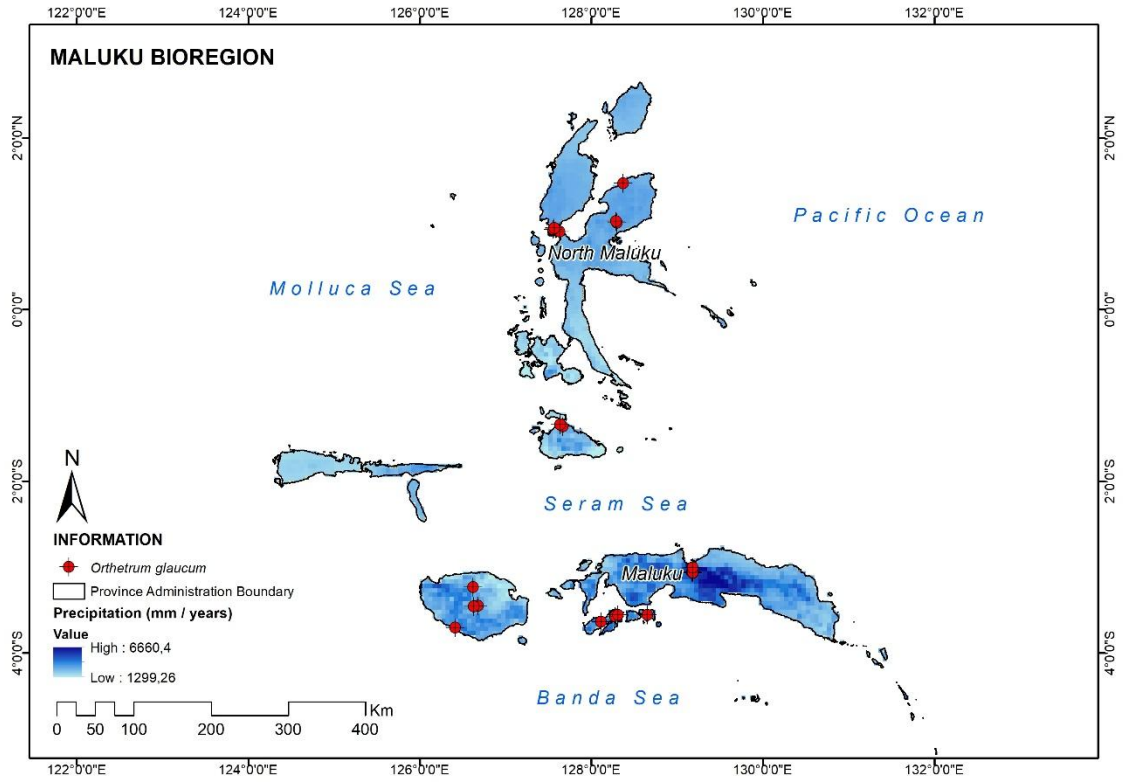


Figure 16. Distribution map of *Orthetrum glaucum* in Maluku bioregion by precipitation gradient

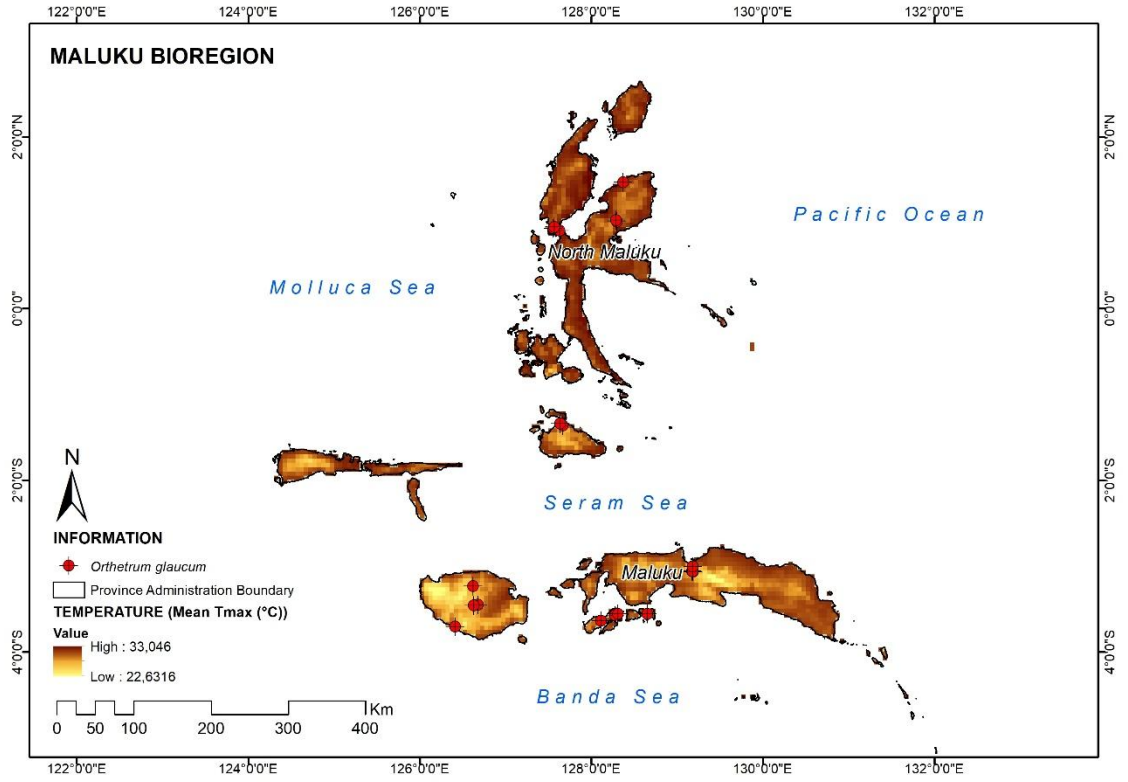


Figure 17. Distribution map of *Orthetrum glaucum* in Maluku bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Nusa Tenggara

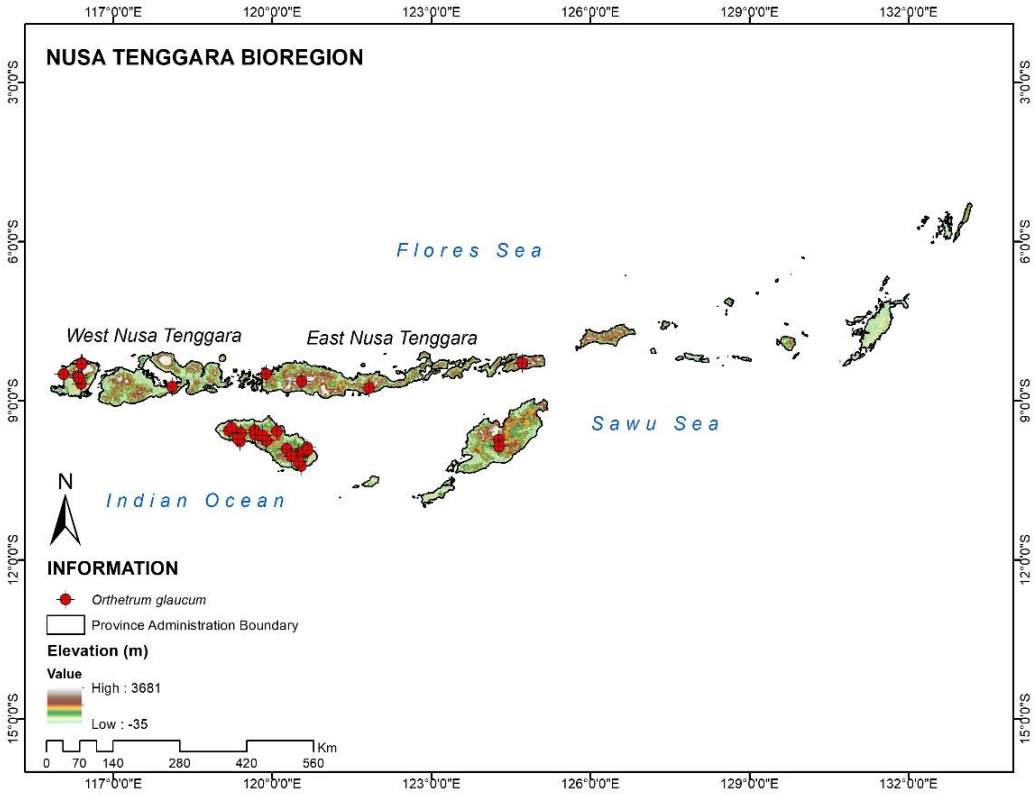


Figure 18. Distribution map *Orthetrum glaucum* in Nusa Tenggara bioregion by elevation gradient

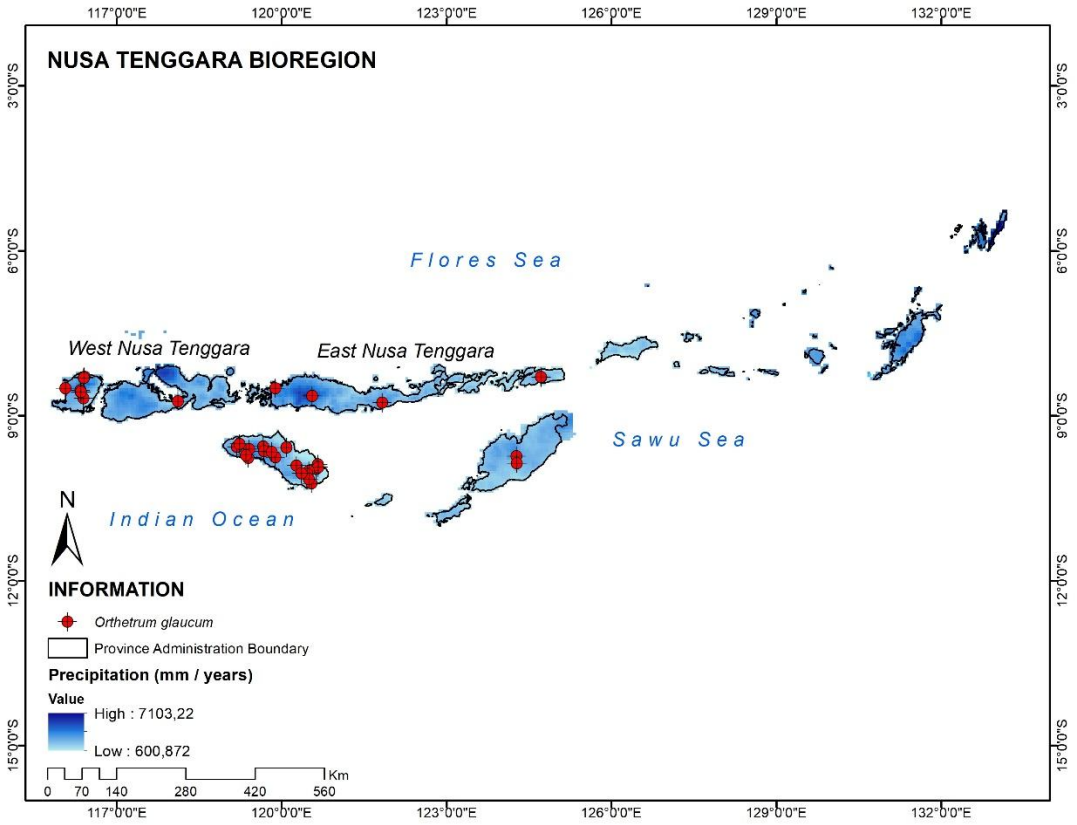


Figure 19. Distribution map of *Orthetrum glaucum* in Nusa Tenggara bioregion by precipitation gradient

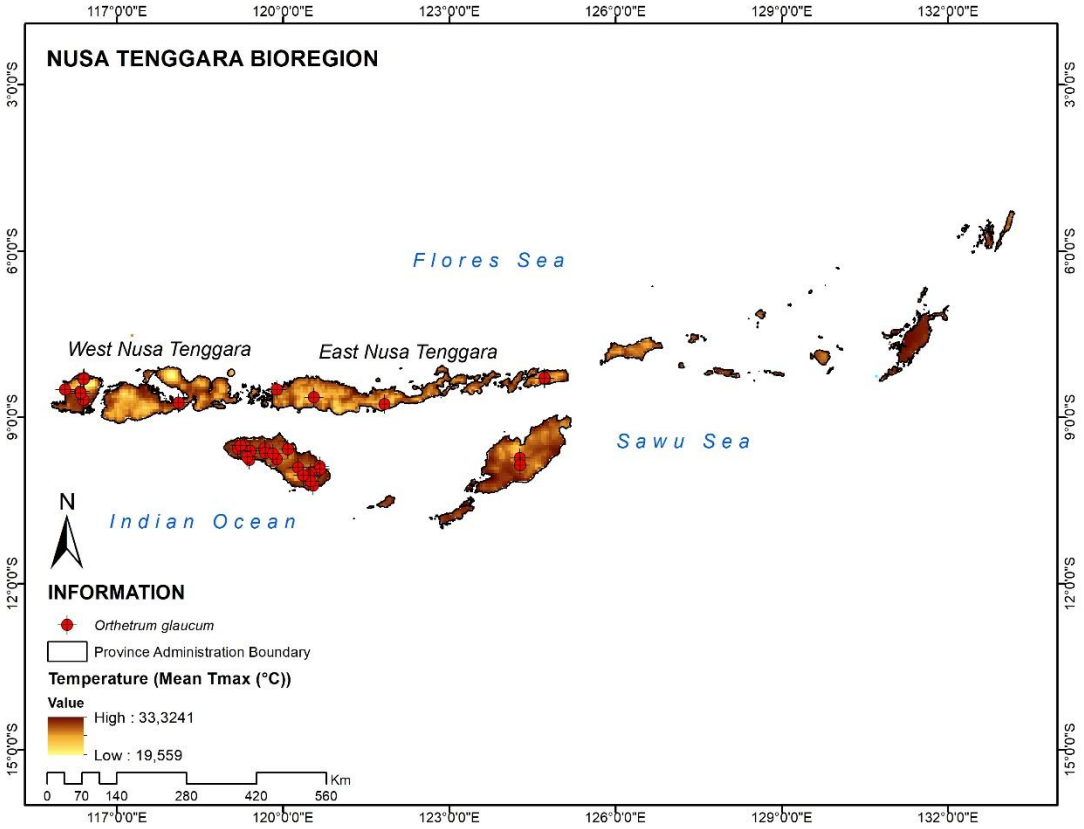


Figure 20. Distribution map of *Orthetrum glaucum* in Nusa Tenggara bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Papua

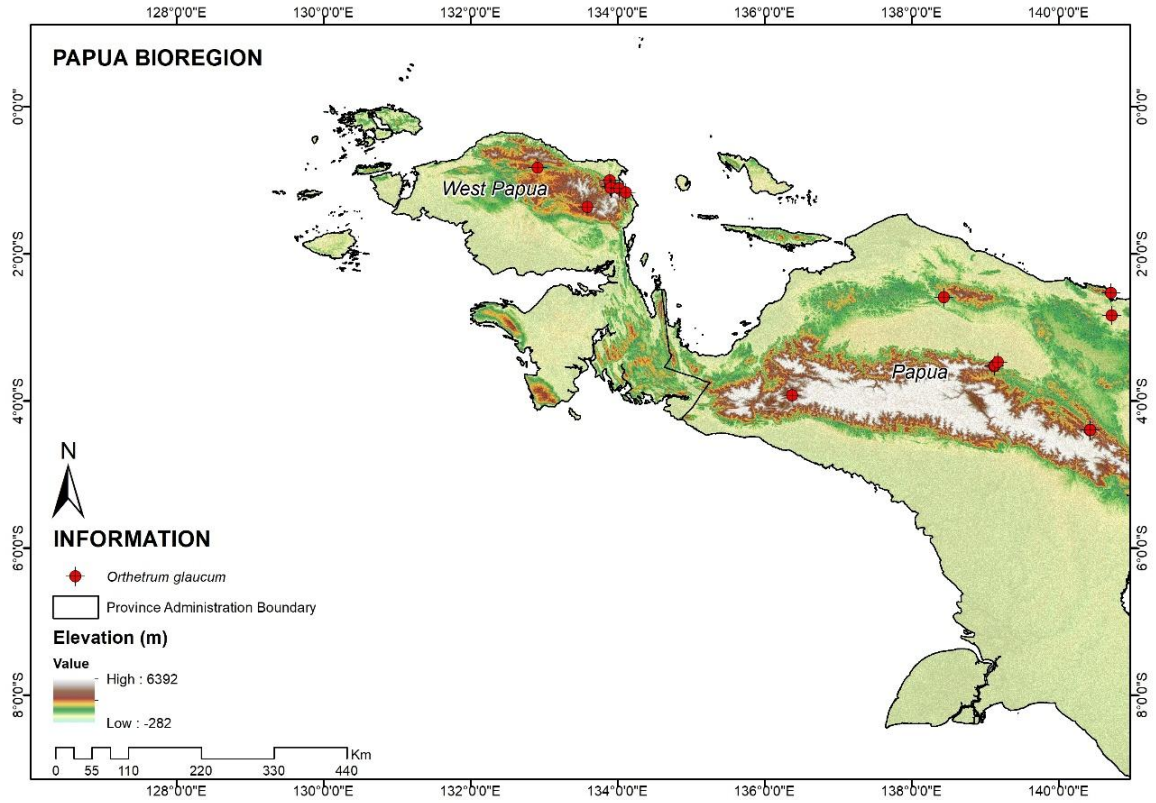


Figure 21. Distribution map *Orthetrum glaucum* in Papua bioregion by elevation gradient

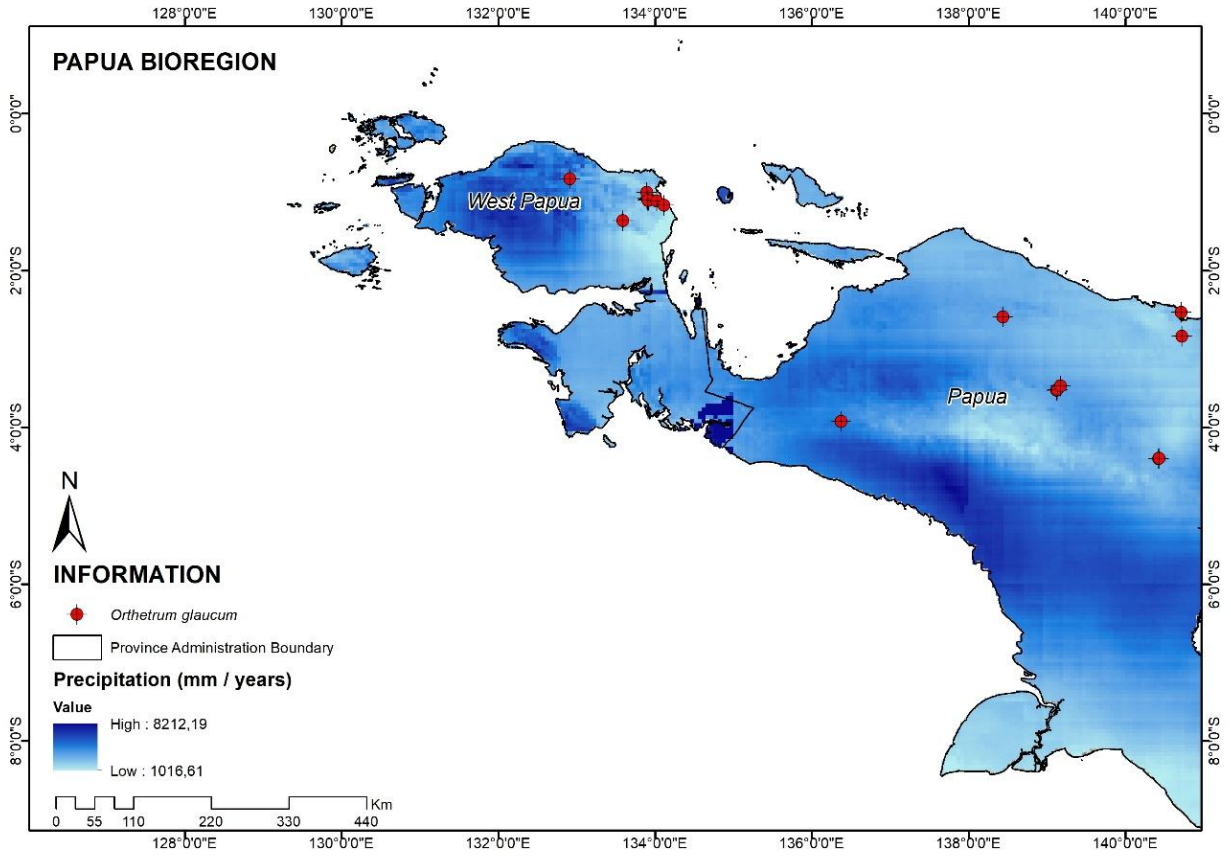


Figure 22. Distribution map of *Orthetrum glaucum* in Papua bioregion by precipitation gradient

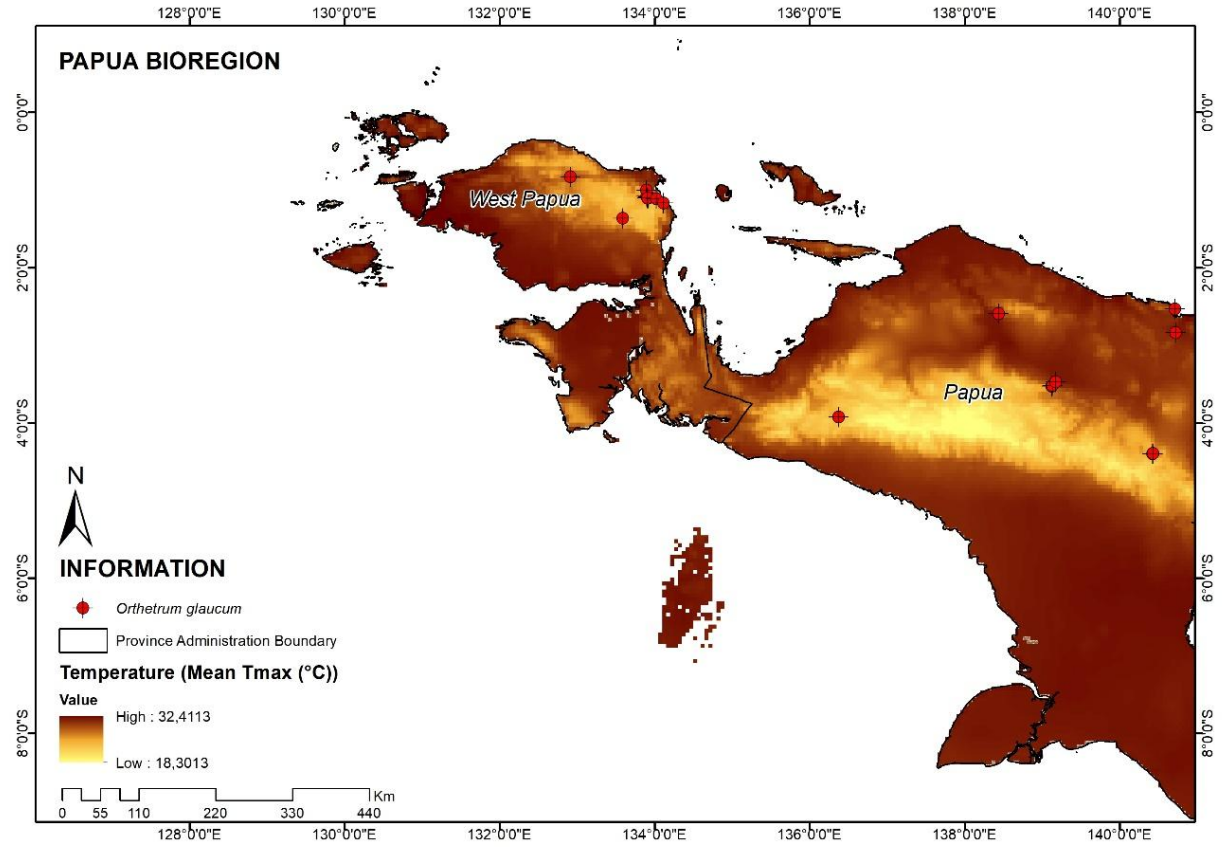


Figure 23. Distribution map of *Orthetrum glaucum* in Papua bioregion by temperature gradient

SPECIES VALUE

Ecological Value

The species *Orthetrum glaucum* plays an important role in maintaining the balance of aquatic ecosystems, primarily as a predator and as a bioindicator of environmental quality. As a predator, this dragonfly helps control populations of small insects, including agricultural pests that can harm crops (Murwitaningsih et al. 2019; Cho et al. 2021). In addition, *O. glaucum* is sensitive to changes in temperature and water quality, making its presence a natural indicator for assessing aquatic ecosystem conditions (Ali et al. 2025).

Economic Value

The species *Orthetrum glaucum* has indirect economic value through its role as a natural predator of pest insects, helping to reduce chemical pesticide use and lower agricultural production costs. In addition, it also contributes to ecotourism and environmental education, as it is often utilized as a subject for research, nature photography, and field observation in aquatic habitats. With this potential, *O. glaucum* can support the development of conservation-based economies that emphasize ecological benefits and environmental sustainability.

Socio-Cultural Value

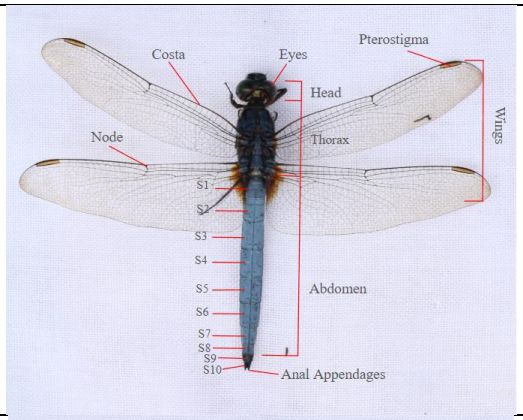
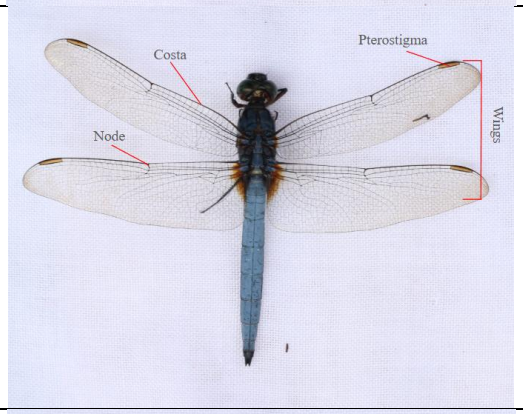
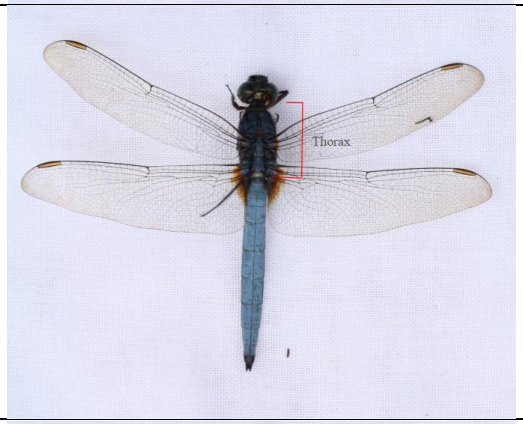
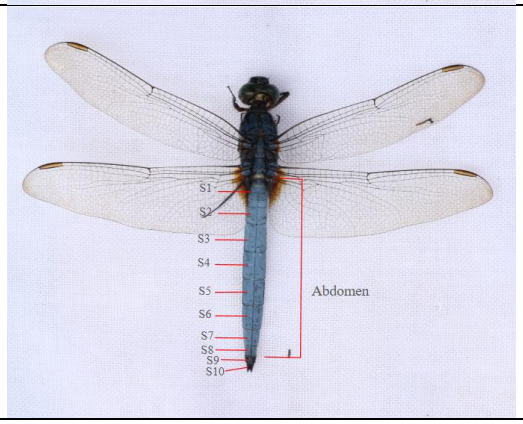
Not identified

THREATS

Agriculture and Urban

DOCUMENTATION

Picture	Title	Caption
	Dorsal vies	*Orthetrum galucum,* Gunung Halimun Salak National Park (Cikaniki Forest Resort), Desa Malasari Kec. Nanggung, Kab. Bogor, Jawa Barat, 26 Oktober 2025

	Morphology	Total body length: 4.8 cm
	Wings	Wing length: 3.7 cm
	Thorax	Thorax: 1.2 cm
	Abdomen	Abdominal length: 3.2 cm

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