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

Tectaria decurrens

(Halberd fern)

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CONSERVATION STATUS

IUCN RedList
Not Evaluated

CITES
This species is not listed in the CITES Appendices

Government of Indonesia
Not Protected (Regulation of the Minister of Environment and Forestry of the Republic of Indonesia No. P.106/MENLHK/SETJEN/KUM.1/12/2018)

OVERALL DISTRIBUTION

Assam, Bangladesh, Borneo, China South-Central, China Southeast, Cook Island, East Himalaya, Fiji, Hainan, India, Indonesia, Laos, Malaya, Myanmar, Nansei-shoto, New Guinea, Nicobar Island, Philippines, Samoa, Santa Cruz Island, Society Island, Solomon Island, Sri Lanka, Taiwan, Thailand, Vietnam.

OVERVIEW

Tectaria decurrens (Halberd Fern), known in Indonesia as Paku Kikir, belongs to the Tectariaceae family and is a terrestrial herbaceous plant with some growing as epiphytes. This fern is unique, it has winged leaf stalks with interconnected venation patterns. *Tectaria decurrens* is found growing on the soil around rocks on riverbanks, cliffs, and tropical forests. The fern plays an important role in ecology as a bioindicator of environmental change. In socio-cultural life, local communities use it as a traditional medicine, and economically, *Tectaria decurrens* can be used as a vegetable and ornamental plant.

Citation
Septianingrum D, Marfi KP, Nur'Aini S. 2026. Indonesia Species Profile of Tectaria decurrens (Polypodiales: Tectariaceae). *SSRS INABIODIV Species Profile and Information*. Vol. 3: No. 0014. https://publishing.ssrs.or.id/ojs/index.php/ssrs-inabiodiv

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IDENTITY

Scientific Name
Tectaria decurrens ((C.Presl) Copel., 1907)

Synonym
Homotypic Synonym
Aspidium decurrens C.Presl
Dryopteris decurrens (C.Presl) Kuntze
Nephrodium decurrens (C.Presl) Baker
Sagenia decurrens (C.Presl) T.Moore
Acrostichum decurrens (C.Presl) Benth.

Heterotypic Synonym
Asplenium alatum Ridl.
Aspidium alatum Brack.
Aspidium copelandii C.Chr.
Aspidium decurrens var. *mamillosa* (T.Moore) Alderw.
Aspidium heterodon Copel.
Aspidium mamillosum (T.Moore) C.Chr.
Aspidium platynotus Kunze
Aspidium pteropus Kunze
Aspidium ridleyanum Alderw.
Cardiochlaena alata Fée
Leptochilus kanashiroi Hayata
Nephrodium mamillosum (T.Moore) G.Nicholson
Polypodium hainanense C.Chr.
Sagenia mamillosa T.Moore
Sagenia pteropus (Kunze) T.Moore
Tectaria dictyosora Copel.
Tectaria peralata Copel.
Tectaria ridleyana (Alderw.) C.Chr.

Common Name (Indonesia)
Paku Kikir

Indonesia Local Name
Paku Kikir

CLASSIFICATION

Kingdom	:	Plantae
Division	:	Tracheophyta
Class	:	Polypodiopsida
Order	:	Polypodiales
Family	:	Tectariaceae
Genus	:	*Tectaria*
Species	:	*Tectaria decurrens*

DESCRIPTION

Herbaceous, terrestrial, and some epiphytic, plant height ranges from 50 – 100 cm. Roots are fibrous and white to brownish. Rhizome erect, long creeping, densely scaly, stiff, and brown, margins entire, and firmly attached to the soil. Stems are round, the direction of growth of the stem is erect, brown, the surface of the stem is covered with dense brown scales, the branching is dichotomous, and the height ranges from 30–60 cm. Fronds are clustered, compound, monomorphic-dimorphic; branching pinnate; fronds arrangement opposite, and winged to near the base. Lamina is oblong-ovate, bright green to deep green, thick, glabrous and shiny surface, rounded base, acuminate-caudate apex, margin entire-serrate; leaf stalks are winged throughout the midrib, 20-25 cm long x 5-8 cm wide; leaf venation is connected to each other entirely (anastomosing). Sori are large, located under the leaf, located along the main venation of the leaf, 2 rows, and some are evenly distributed almost covering the entire lower surface of the fertile leaf (acrostichoid).

ECOLOGY AND HABITAT

Tectaria decurrens is a terrestrial fern found growing in the soil around riverbanks. Its habitat tends to be cliffs, large rocks along riverbanks or waterfalls, and even in tropical rainforests. This fern grows at altitudes below 1.500 m (rarely found above 2.000 m) and thrives in ecological conditions below 25°C and above 50% humidity (Patil *et al*. 2020).

DISTRIBUTION

Distribution Region

Regional Distribution in Indonesia (Record)
Java, Sumatera, Borneo, Celebes, Maluku, Papua

Distribution Type

Global

Distribution Map

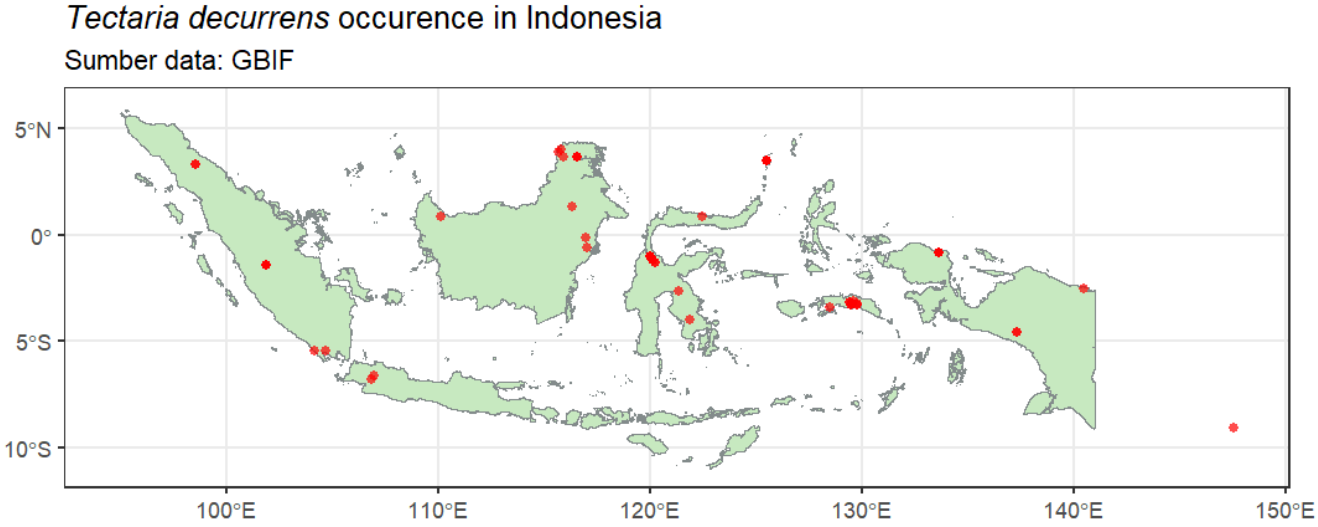


Figure 1. Distribution map *Tectaria decurrens* in Indonesia

Statistical Overview of Distribution

Indicator	Bioregion	Value (total, mean ± SD, range)	Unit
Distribution (GBIF on 2025)	Java	3	Record
	Sumatera	8	Record
	Borneo	14	Record
	Celebes	25	Record
	Maluku	15	Record
	Papua	8	Record
Bioclimatic – Elevation (DEM SRTM)	Jawa	619,33 ± 137,66 (523 – 777)	Mean Sea Level (m)
	Sumatera	362,88 ± 530,96 (23 – 1566)	Mean Sea Level (m)
	Borneo	393,64 ± 528,55 (6 – 1505)	Mean Sea Level (m)
	Celebes	749,56 ± 351,21 (353 – 1551)	Mean Sea Level (m)
	Maluku	881,93 ± 503,86 (268 – 1817)	Mean Sea Level (m)
	Papua	271,12 ± 475,02 (71 – 1440)	Mean Sea Level (m)
Bioclimatic – Precipitation (CHIRPS UCSB) (2015-2025)	Jawa	3492,52 ± 204,44 (3297,23 – 3705,02)	mm / years
	Sumatera	2831,64 ± 243,50 (2500,50 – 3222,48)	mm / years
	Borneo	3520,56 ± 595,24 (2219,02 – 3943,86)	mm / years
	Celebes	2464,71 ± 799,18 (1162,77 – 3840,85)	mm / years
	Maluku	5542,03 ± 980,54 (4054,40 – 6546,21)	mm / years
	Papua	2778,81 ± 1532,29 (1887,79 – 5257,40)	mm / years
Bioclimatic – Temperature (CHIRTS UCSB) (2015-2025)	Jawa	27,62 ± 1,64 (25,73 – 28,73)	Mean Tmax (°C)
	Sumatera	30,99 ± 2,76 (25,01 – 32,87)	Mean Tmax (°C)
	Borneo	29,40 ± 2,46 (25,10 – 32,42)	Mean Tmax (°C)
	Celebes	28,18 ± 2,27 (22,58 – 30,30)	Mean Tmax (°C)
	Maluku	27,82 ± 2,23 (24,70 – 30,81)	Mean Tmax (°C)
	Papua	29,37 ± 0,09 (29,16 – 29,42)	Mean Tmax (°C)

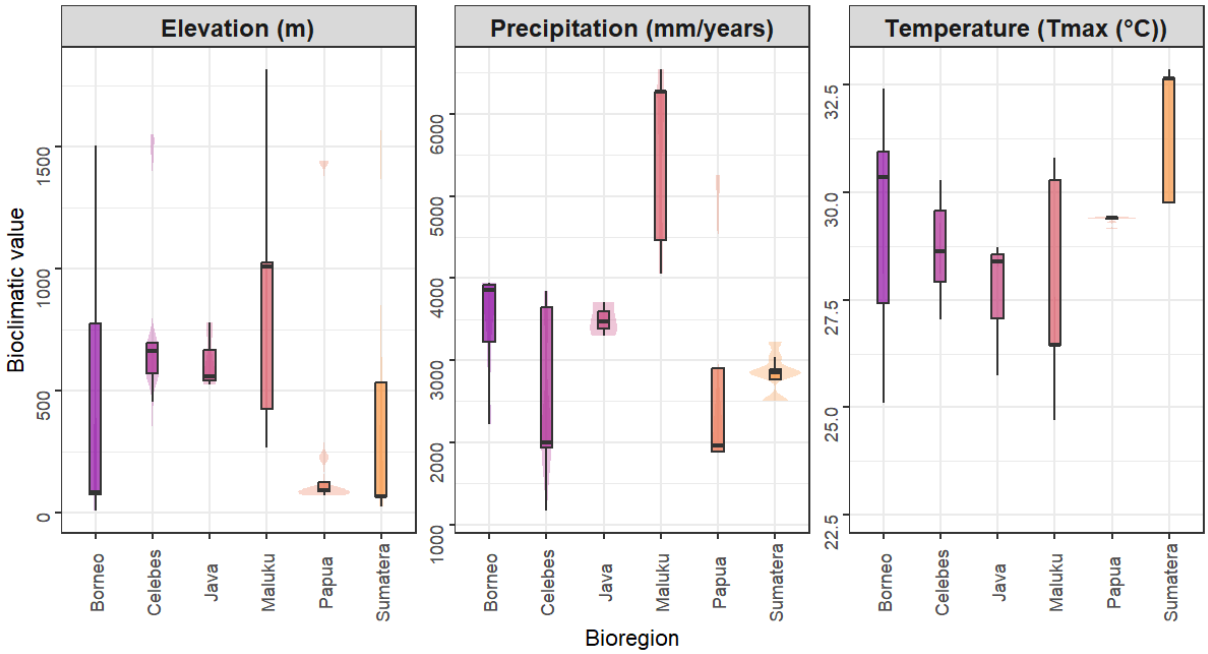


Figure 2. Statistical of bioclimatic characteristic

Distribution Map Based on Indonesia Bioregion – Java

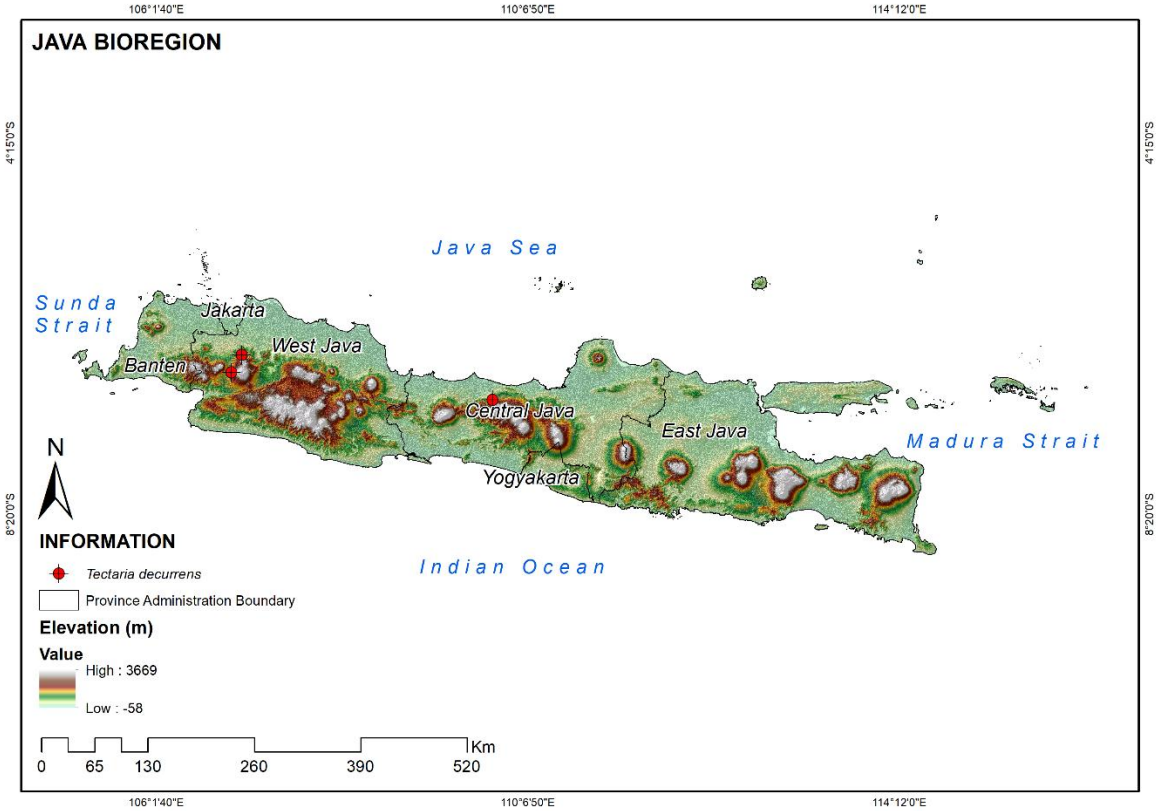


Figure 3. Distribution map of *Tectaria decurrens* in Java bioregion by elevation gradient

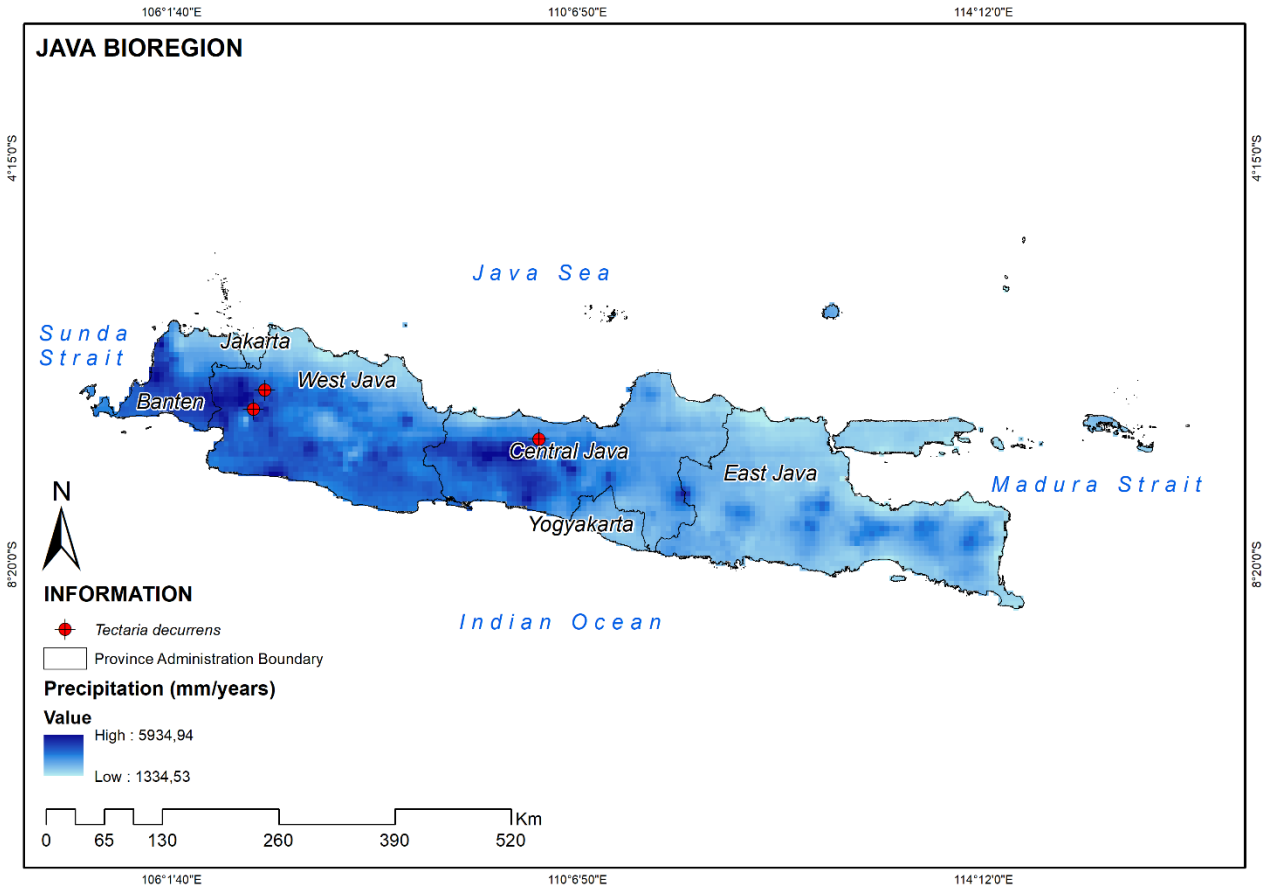


Figure 4. Distribution map of *Tectaria decurrens* in Java bioregion by precipitation gradient

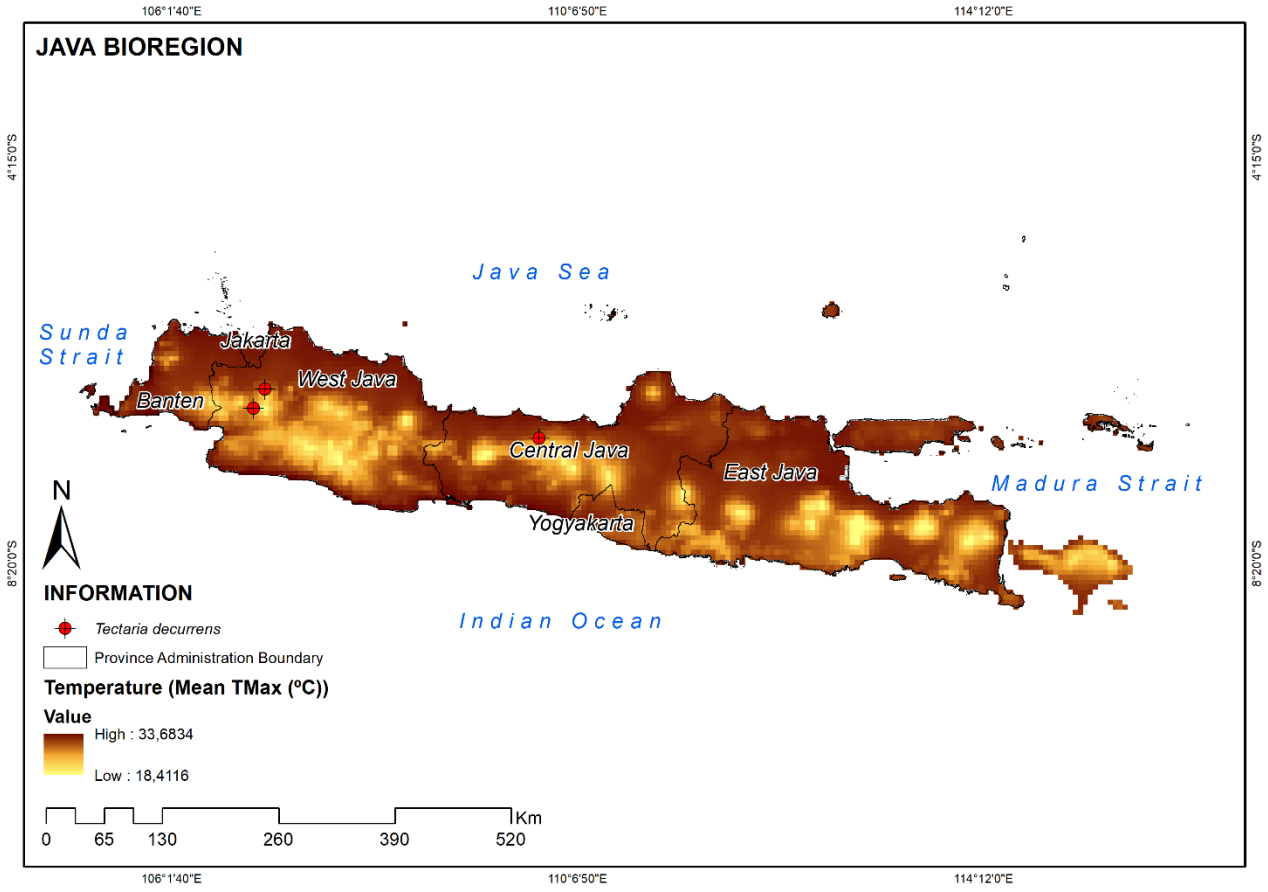


Figure 5. Distribution map of *Tectaria decurrens* in Java bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Sumatera

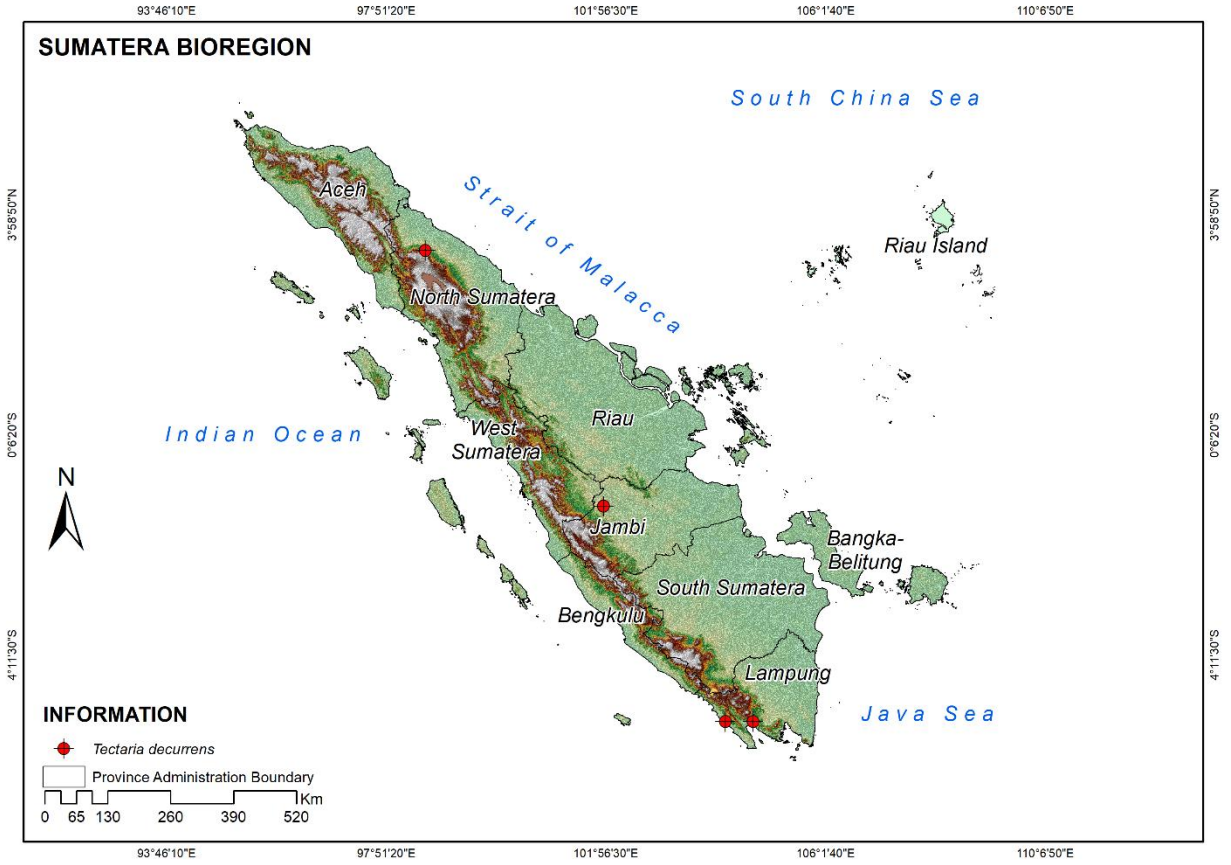


Figure 6. Distribution map of *Tectaria decurrens* in Sumatera bioregion by elevation gradient

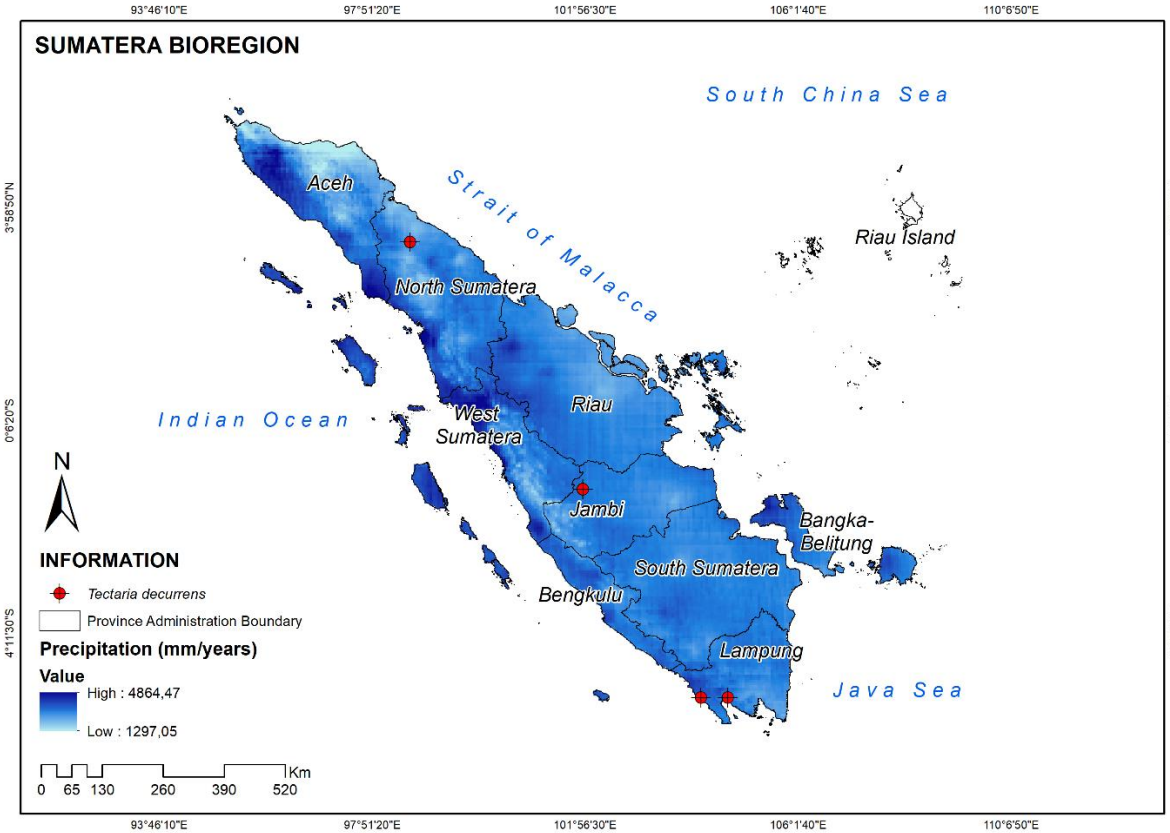


Figure 7. Distribution map of *Tectaria decurrens* in Sumatera bioregion by precipitation gradient

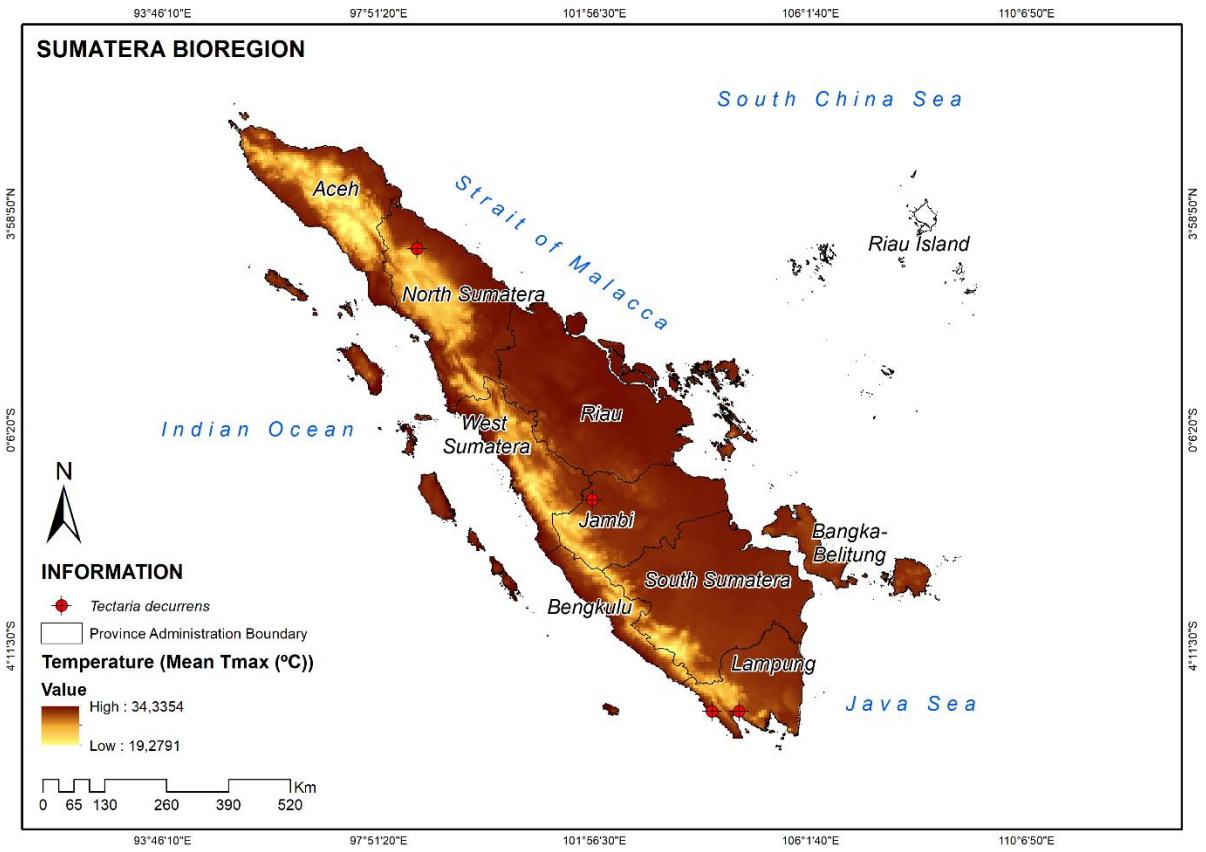


Figure 8. Distribution map of *Tectaria decurrens* in Sumatera bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Borneo

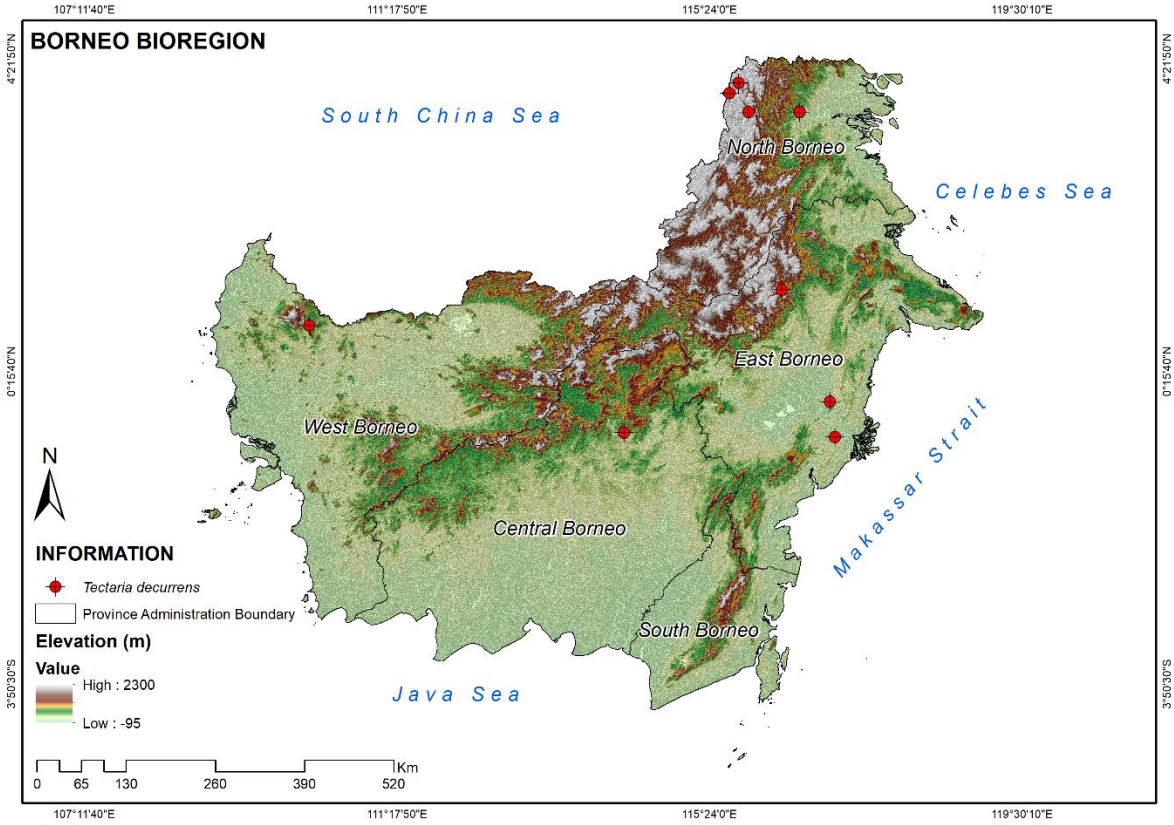


Figure 9. Distribution map of *Tectaria decurrens* in Borneo bioregion by elevation gradient

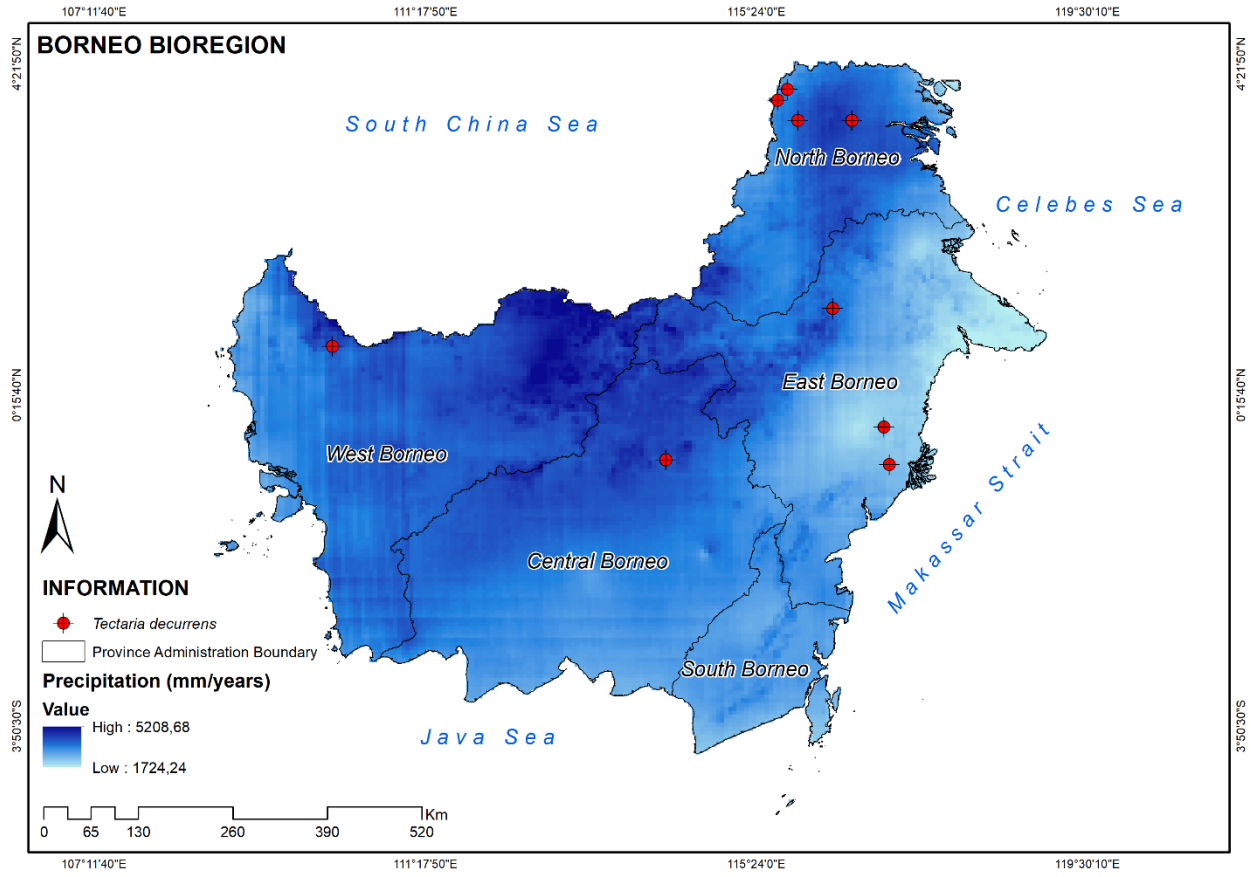


Figure 10. Distribution map of *Tectaria decurrens* in Borneo bioregion by precipitation gradient

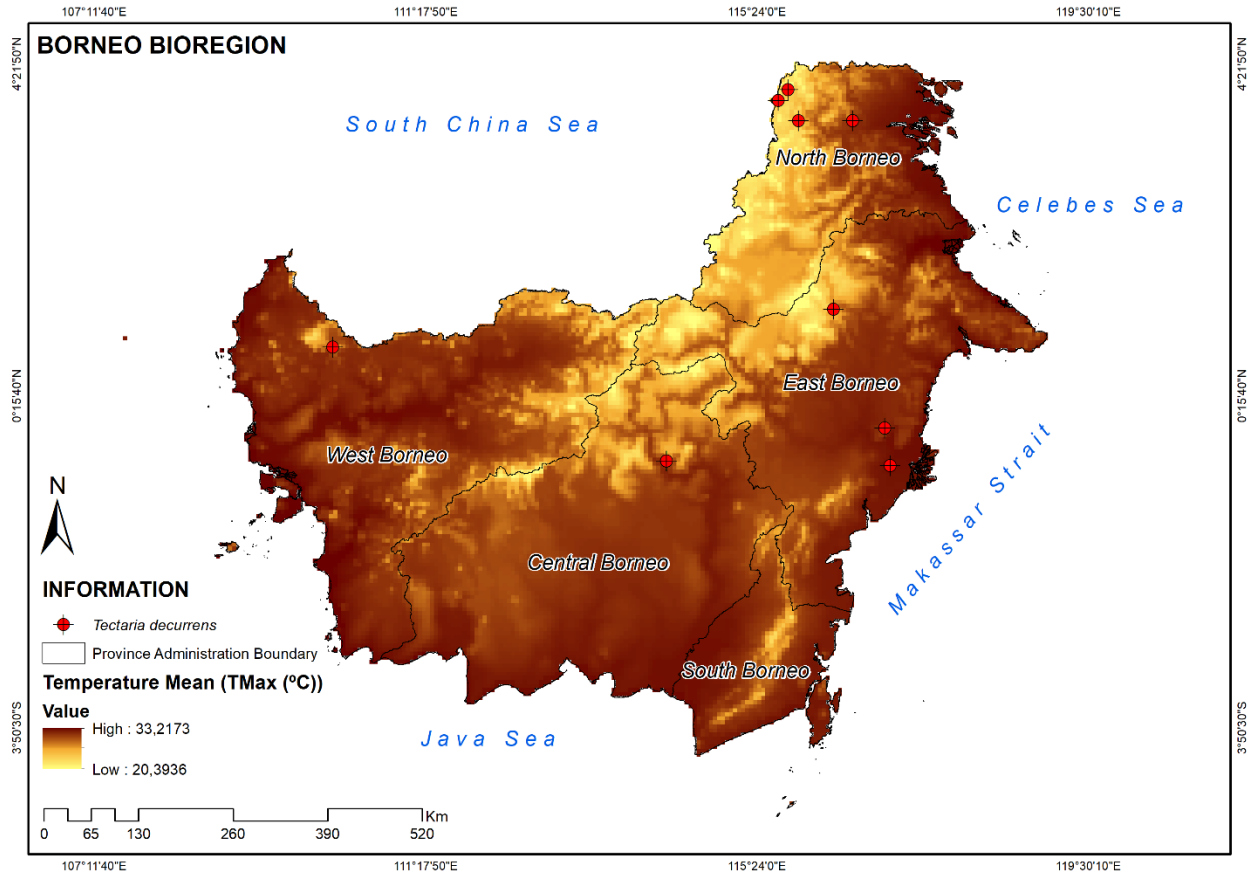


Figure 11. Distribution map of *Tectaria decurrens* in Borneo bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Celebes

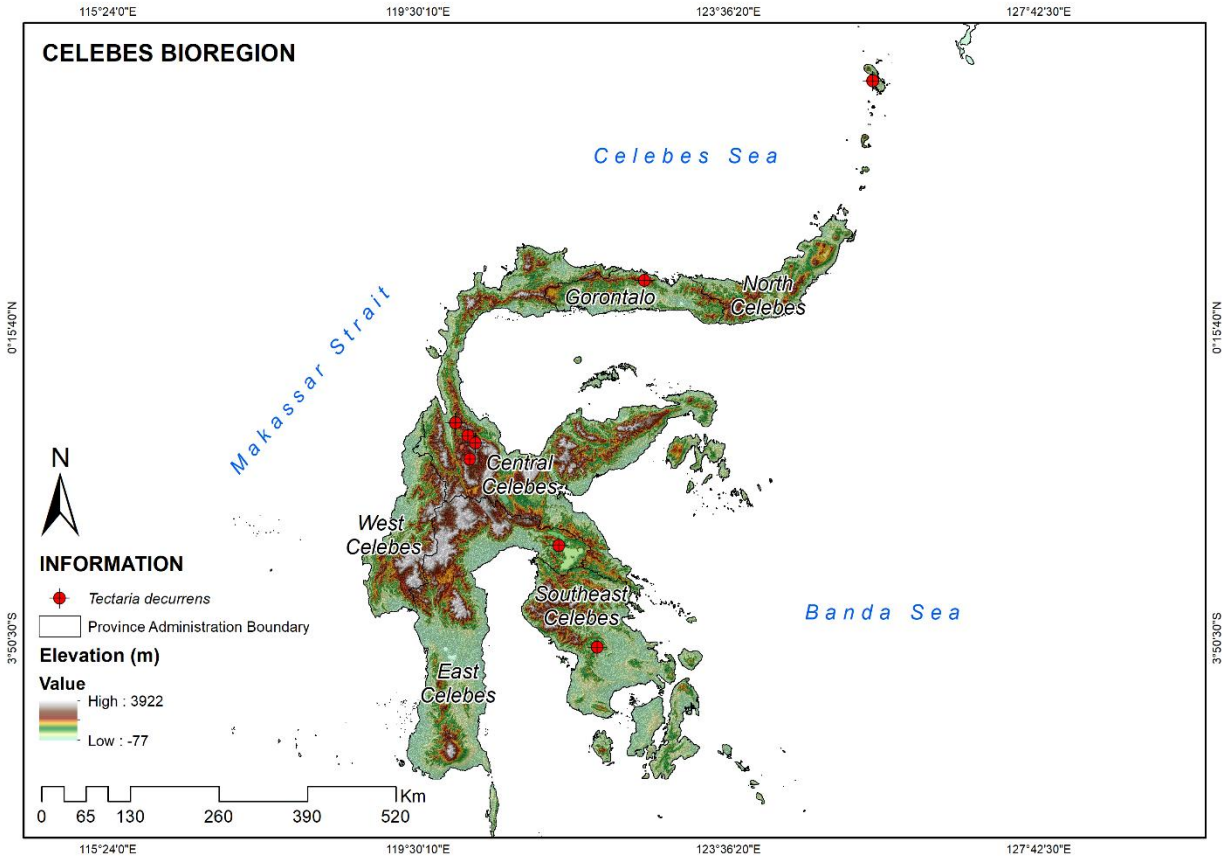


Figure 12. Distribution map of *Tectaria decurrens* in Celebes bioregion by elevation gradient

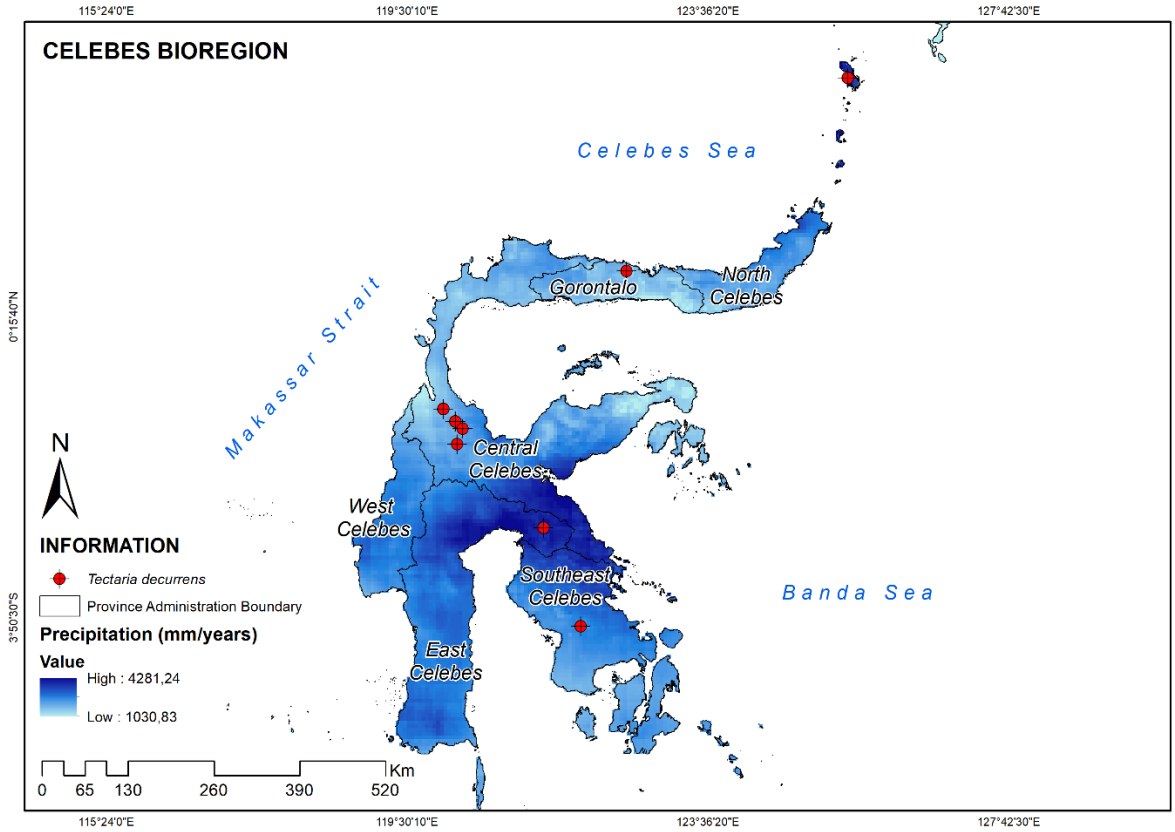


Figure 13. Distribution map of *Tectaria decurrens* in Celebes bioregion by precipitation gradient

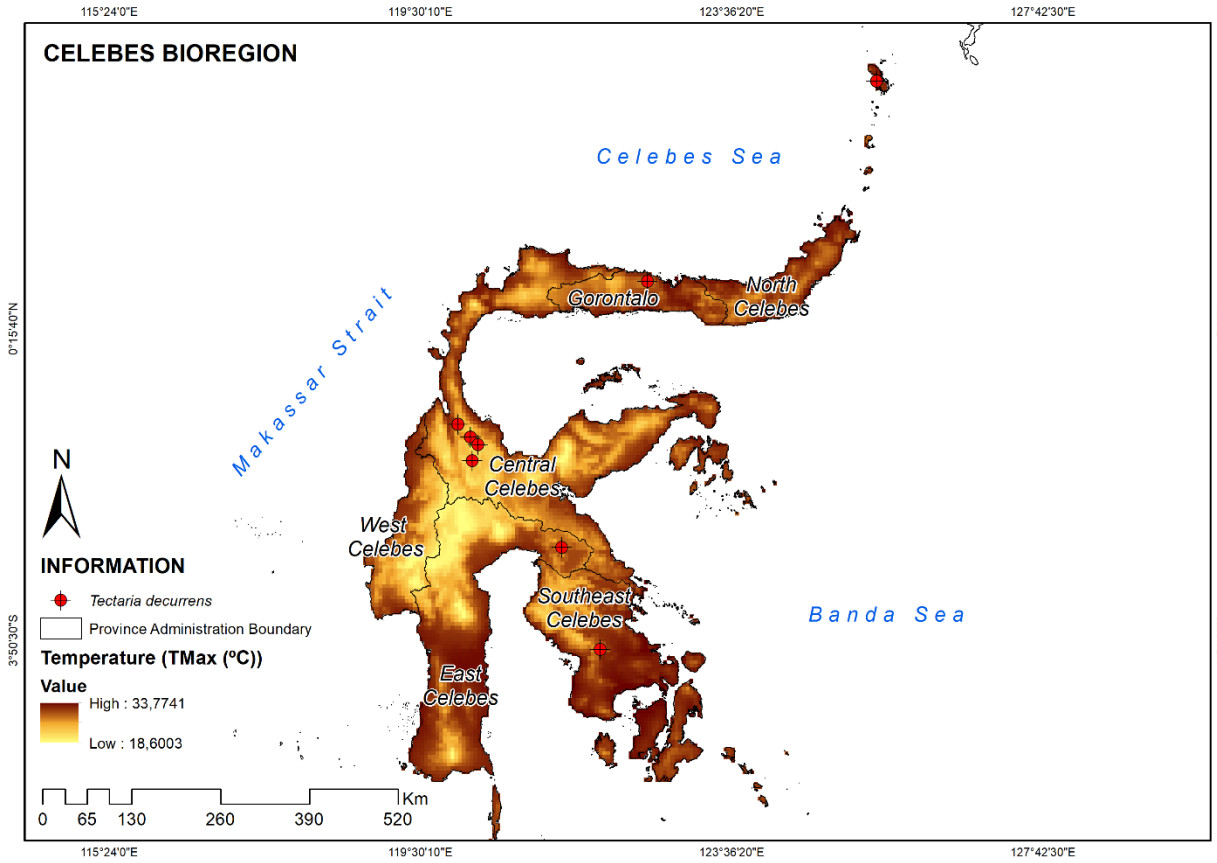


Figure 14. Distribution map of *Tectaria decurrens* in Celebes bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Maluku

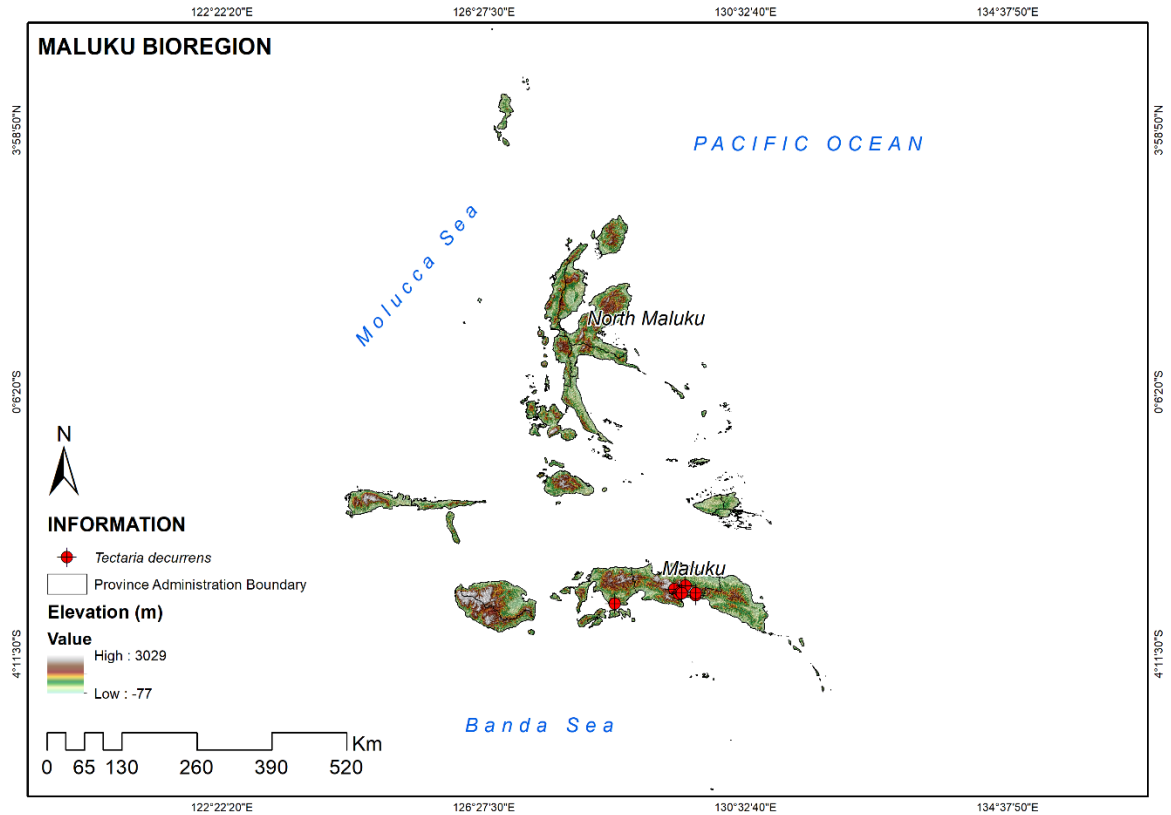


Figure 15. Distribution map of *Tectaria decurrens* in Maluku bioregion by elevation gradient

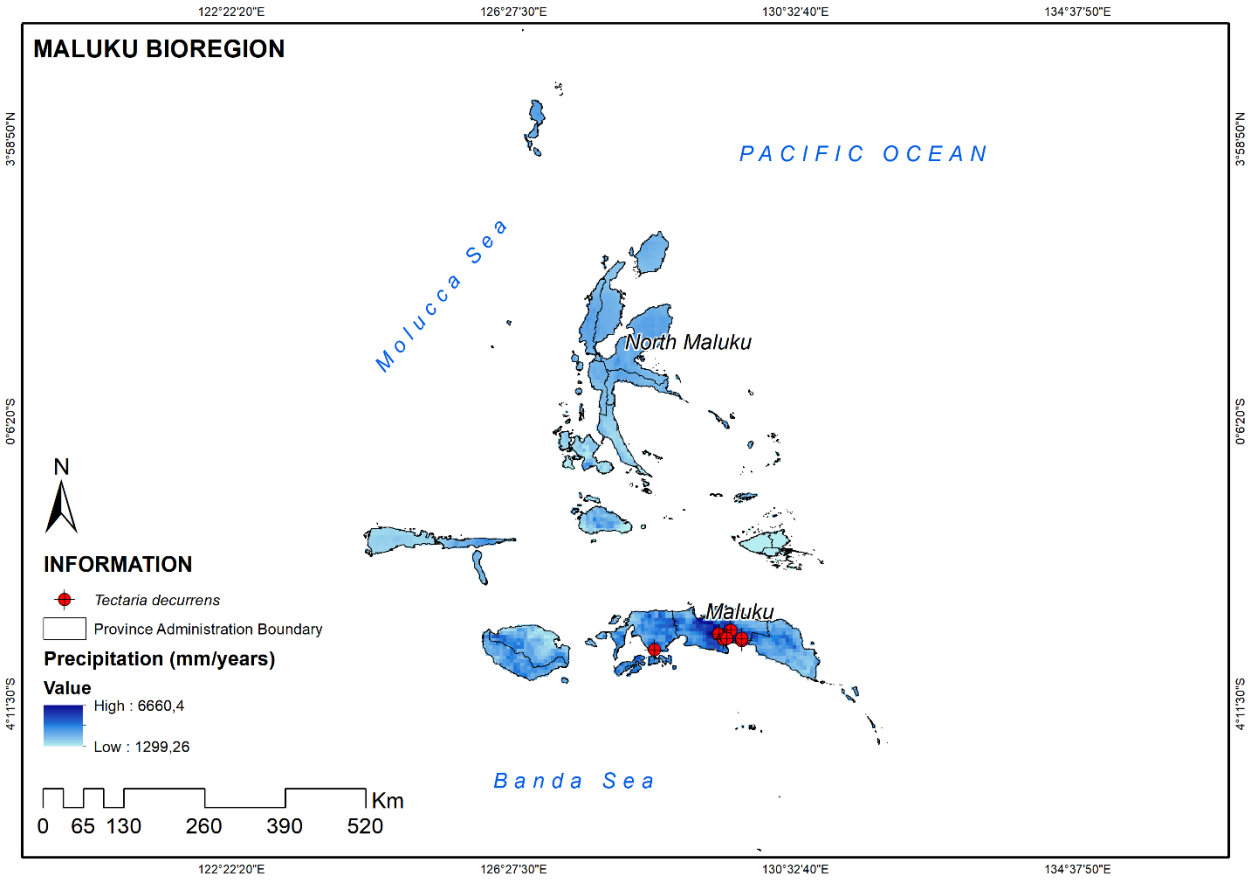


Figure 16. Distribution map of *Tectaria decurrens* in Maluku bioregion by precipitation gradient

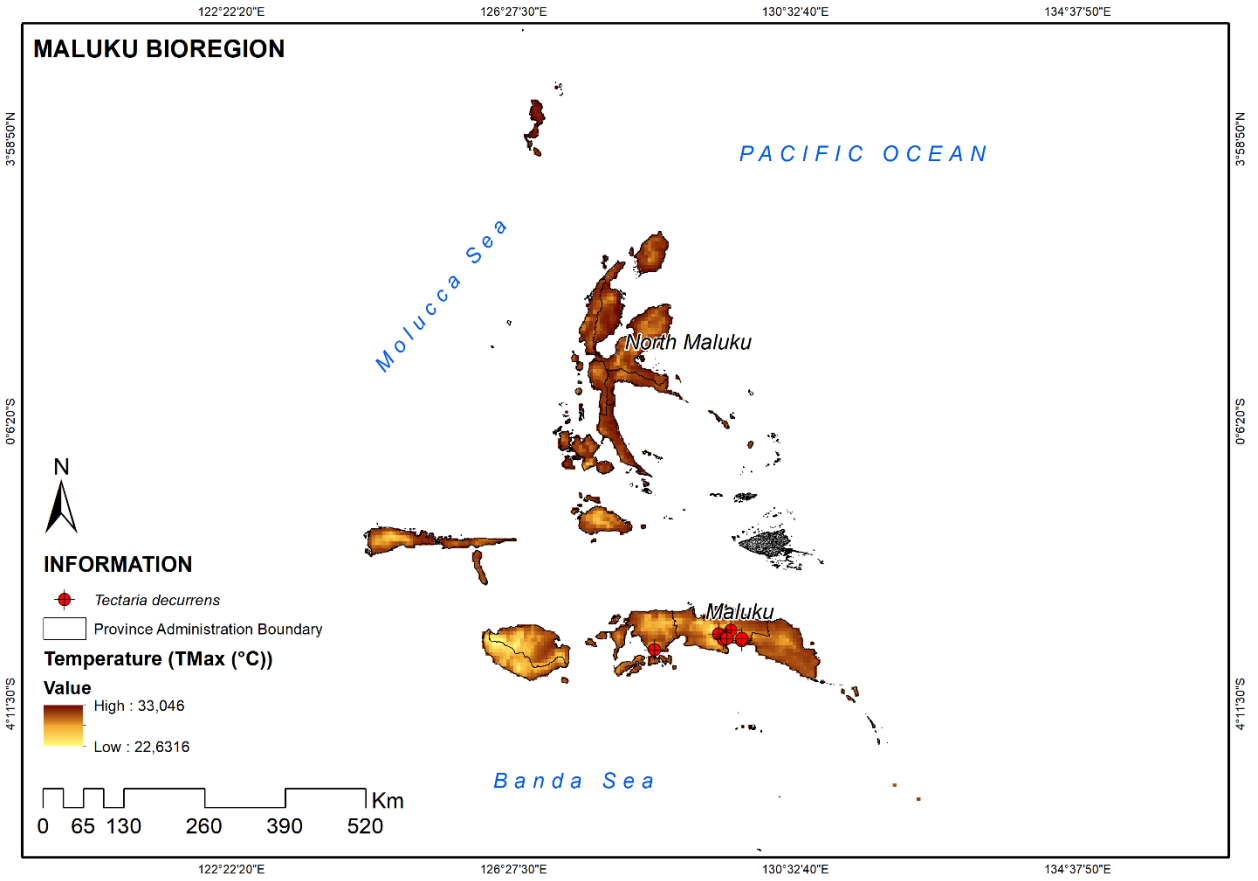


Figure 17. Distribution map of *Tectaria decurrens* in Maluku bioregion by temperature gradient

Distribution Map Based on Indonesia Bioregion – Papua

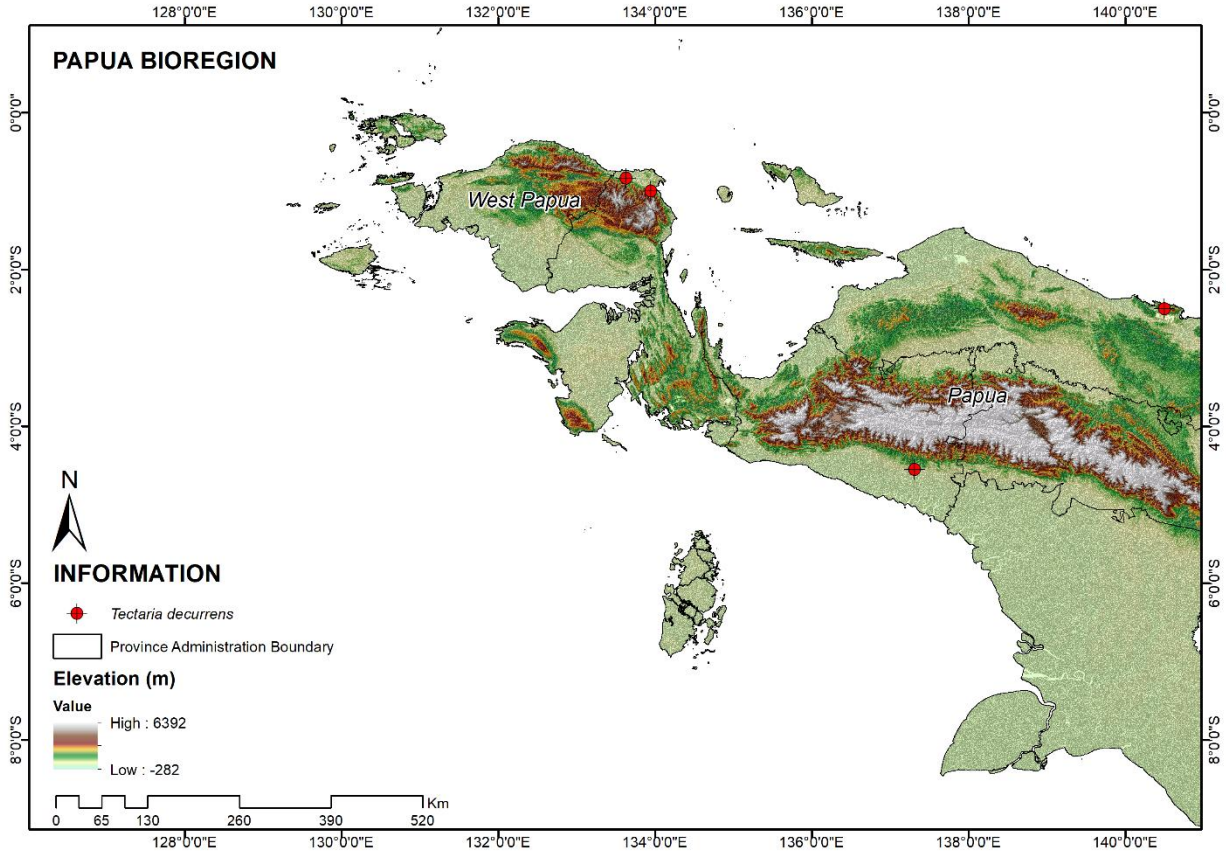


Figure 18. Distribution map of *Tectaria decurrens* in Papua bioregion by elevation gradient

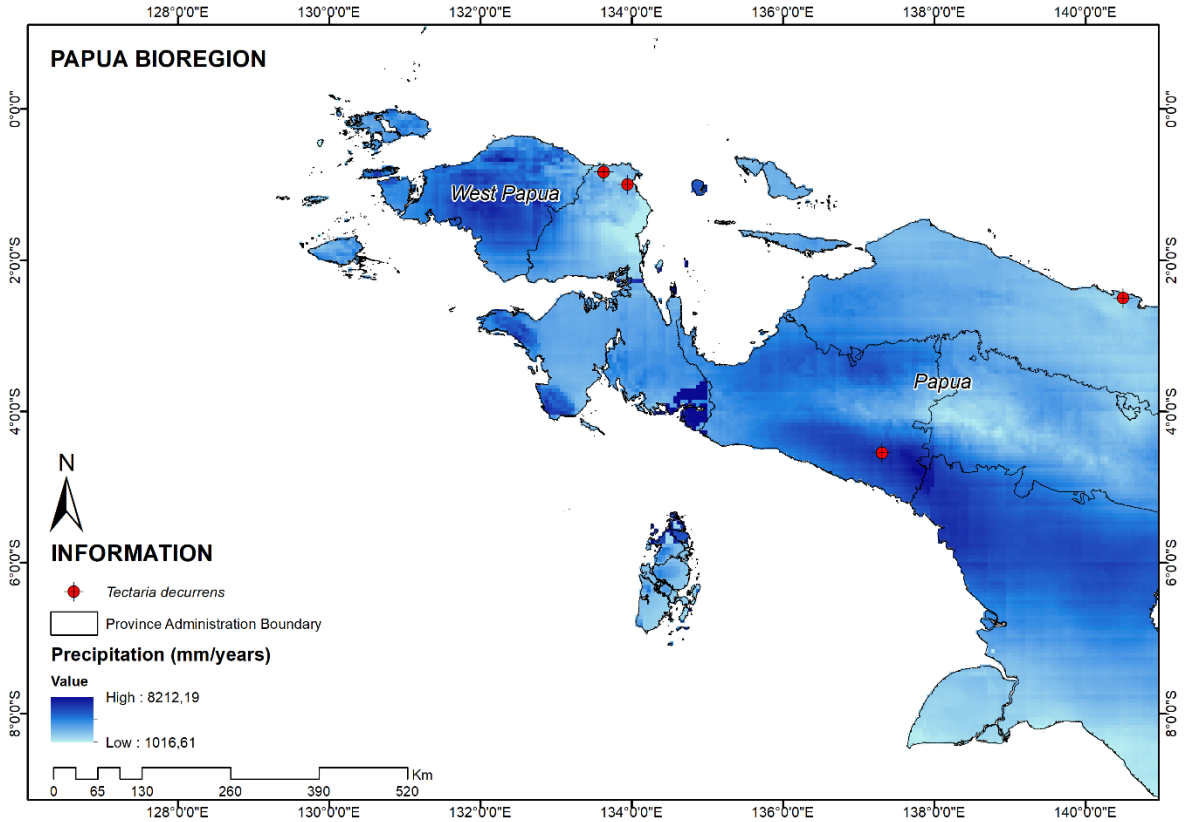


Figure 19. Distribution map of *Tectaria decurrens* in Papua bioregion by precipitation gradient

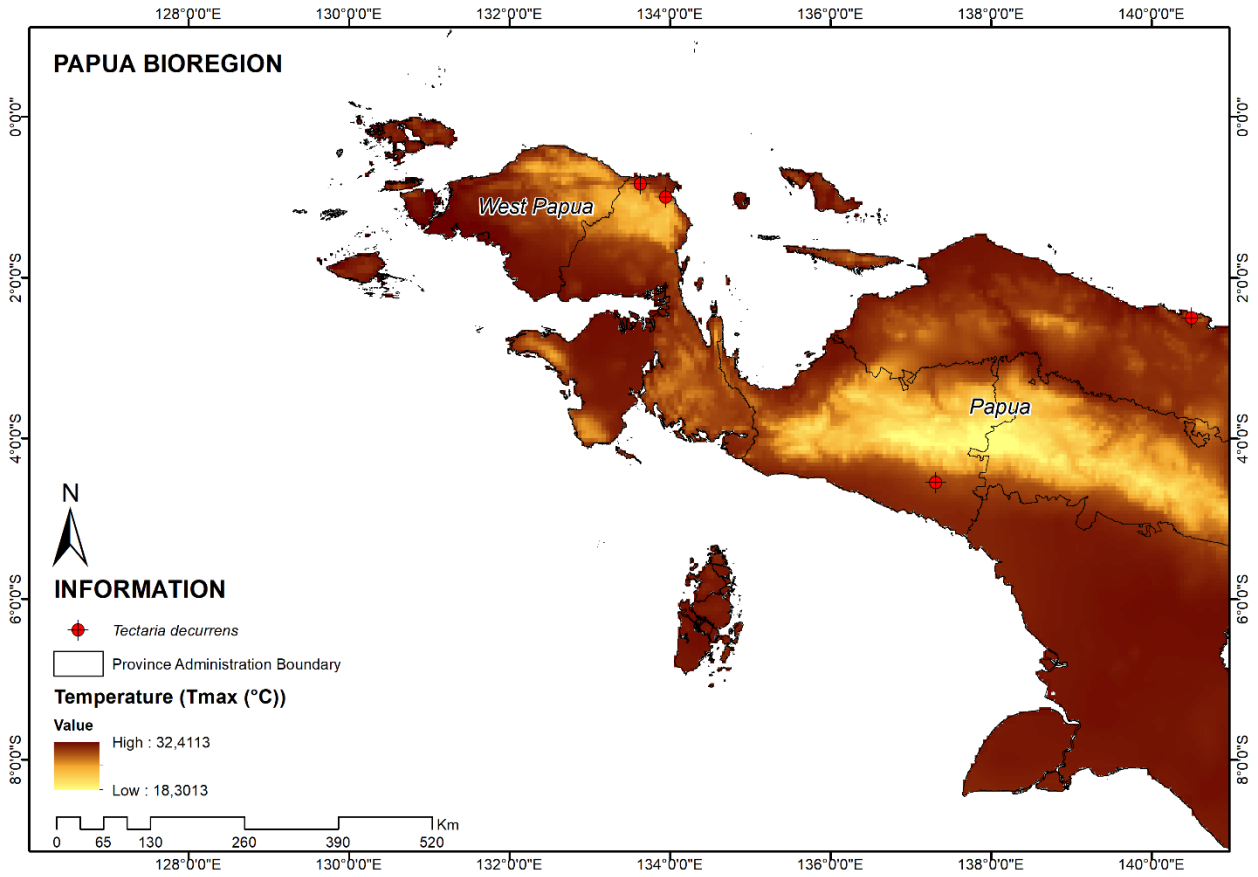


Figure 20. Distribution map of *Tectaria decurrens* in Papua bioregion by temperature gradient

SPECIES VALUE

Ecological Value

Paku Kikir (*Tectaria decurrens*) is a bioindicator of habitat or environmental change. This is based on the characteristics of its habitat, green open spaces that tend to be damp and have low temperatures. Therefore, when its presence is absent, changes in ecological factors such as temperature and humidity occur in that habitat (Febrianti *et al*. 2024).

Economic Value

Tectaria decurrens has aesthetic value, both in its leaf shape, texture, and venation. Therefore, this fern is commonly grown as a houseplant. Furthermore, this fern can be used as a food ingredient, particularly as a vegetable when young (juvenile) (Faizza *et al*. 2024).

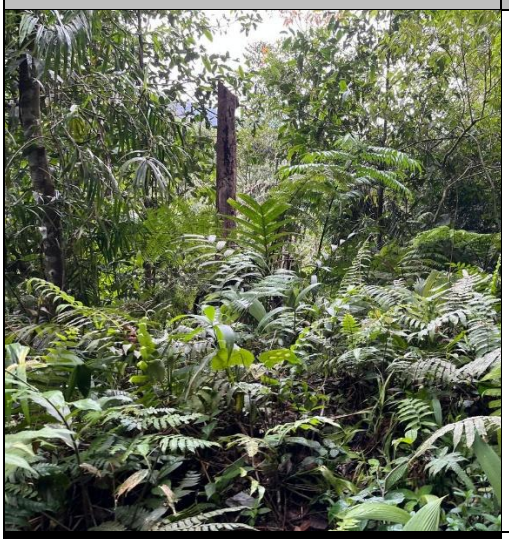
Socio-Cultural Value

Tectaria decurrens is commonly known as paku kikir. In some areas, paku kikir is used by local people as a traditional medicine (Nasution *et al*. 2018).

THREATS

Land use change

DOCUMENTATION

Picture	Title	Caption
	Habitat	*Tectaria decurrens*, Mount Halimun Salak National Park, Sukabumi, West Java. 11th January 2026.
	Adaxial Fronds	*Tectaria decurrens*, Mount Halimun Salak National Park, Sukabumi, West Java. 11th January 2026.
	Abaxial Fronds	*Tectaria decurrens*, Mount Halimun Salak National Park, Sukabumi, West Java. 11th January 2026.

	Various Fronds Shape (Adaxial)	*Tectaria decurrens*, Mount Halimun Salak National Park, Sukabumi, West Java. 11th January 2026.
	Various Fronds Shape (Abaxial)	*Tectaria decurrens*, Mount Halimun Salak National Park, Sukabumi, West Java. 11th January 2026.

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