



A Photo Guide to  
**Plants of**  
**Nui Chua**  
**National Park**



# A Photo Guide to

# Plants of Nui Chua National Park

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under the project of “Plant diversity assessment in limestone karsts in Laos and Vietnam”.



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## Preface

We are delighted to publish this book, “A Photo Guide to Plants of Nui Chua National Park”. The Nui Chua National Park is known to harbour a unique and characteristic arid forest ecosystem. Since 2000, at least seven species of vascular plants have been newly discovered and described from the national park, indicating the flora of this region is still not fully understood. This highlights the necessity of a comprehensive understanding of the plant diversity in the park for effective conservation planning.

To contribute to elucidation on the flora of the Nui Chua National Park, a botanical survey was conducted from 19–24 December in 2023. This photo guidebook is based on our 311 voucher specimens collected during the survey. It aims to serve as a reference for researchers, conservationists, and anyone interested in the flora of the national park.

This photo guidebook is freely available on the website of the Kagoshima University Museum (<https://www.museum.kagoshima-u.ac.jp/publications/publications.html>) and the Nagao Natural Environmental Foundation (<https://www.nagaofoundation.or.jp/>) under a Creative Commons Attribution-NonCommercial (CC-BY-NC). We hope this book aids in the ongoing efforts to study and conserve the biodiversity of Vietnam and Southeast Asia.

25 June 2024

Takenori Yamamoto

Shuichiro Tagane

Van-Son Dang

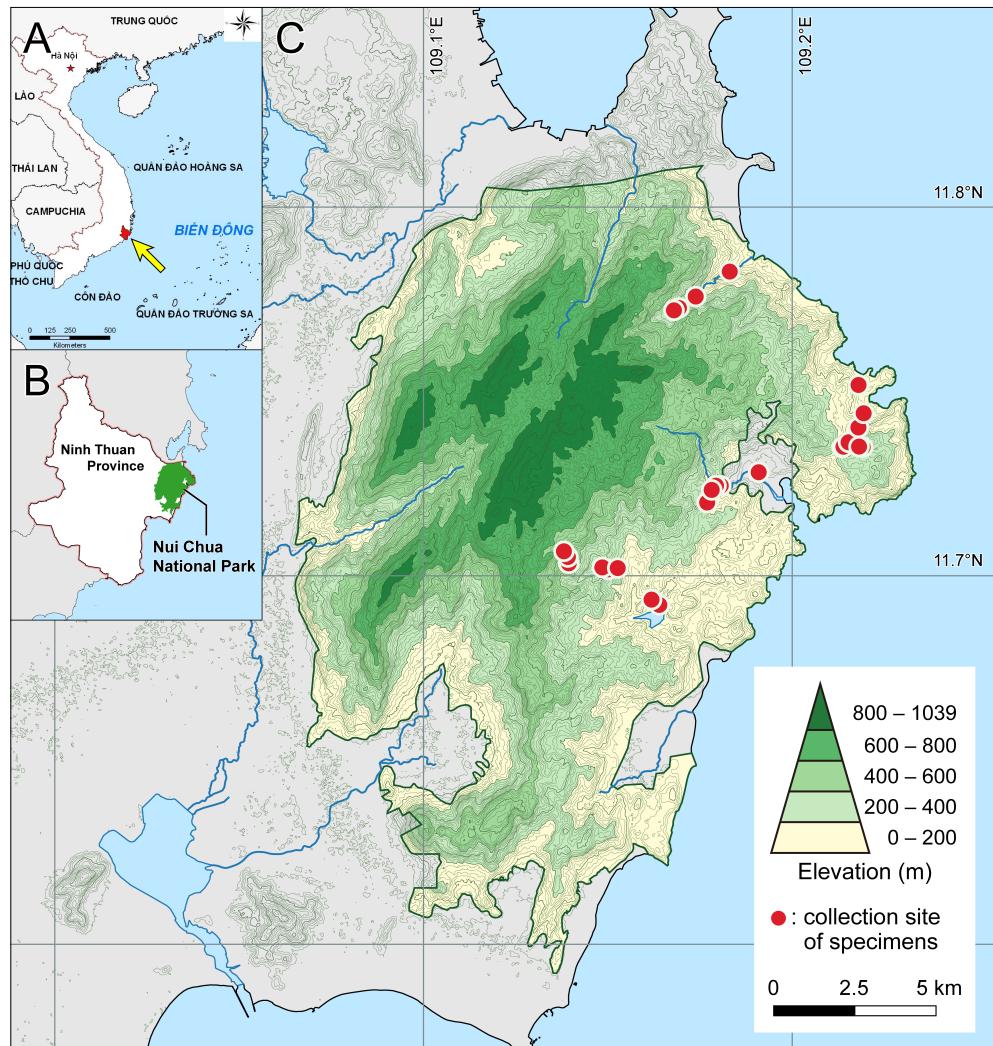


# Introduction

Nui Chua National Park, one of 34 national parks in Vietnam, is located on a mountainous promontory in Ninh Thuan Province, the South Central of Vietnam. It was designated in 2003 with a total area of 29,865 ha (terrestrial area of 22,513 ha + marine area of 7,352 ha), and the range of elevation between the sea level to 1,039 m on the highest peak, Co Tuy peak. It is known to be the driest area in Vietnam, with only three months of the wet season every year (September to November), and an average annual precipitation is no more than ca. 700 mm (BIFIDI 2001; Duc et al. 2009; Hop et al. 2021), thereby encompassing unique and characteristic arid forest ecosystem (Wikle and Le 2013; MONRE 2014; Nui Chua National Park 2024). Duc et al. (2009) stated the vegetation is dry thorny scrubland and thorny woodland below 450 m asl, shifting to dry deciduous forest or sclerophyll evergreen forest below 700 m asl., becoming relatively undisturbed lower montane evergreen forest at elevations above 700 m. To date, more than 1,500 species of vascular plants have been recorded from the national park, including many endemic and/or threatened species (Nui Chua National Park 2024). Even recently, several new species have been discovered and described based on specimens collected in and around the national park: *Aristolochia nuichuaensis* T.V.Do & Luu, *Balanites vietnamica* Luu, T.Trung Nguyen & T.Q.T.Nguyen, *Billolivia moelleri* D.J.Middleton, *Curcuma arida* Škorničk. & N.S.Lý, *Lanonia nuichuaensis* A.J.Hend. & N.Q.Dung, *Lasianthus nuichuaensis* V.S.Dang & Naiki, and *Licuala longiflora* A.J.Hend., N.K.Ban & N.Q.Dung (Henderson et al. 2008; Middleton et al. 2014; Leong-Škorničková et al. 2015; Do et al. 2019; Henderson and Dung 2022; Dang and Naiki 2023; Nguyen et al. 2023), indicating the flora of the Nui Chua National Park is not yet sufficiently understood.

To enrich our knowledge on the flora of the Nui Chua National Park, a botanical survey was conducted during 19–24 December in 2023. Through our survey, a total of 311 voucher specimens were collected with silica-dried samples for further DNA analyses, and their photographs in the field. The specimens were basically collected at least in three sets, and deposited in three herbaria, located in Institute of Tropical Biology (VNM), Faculty of Forest Science, National University of Laos (FOF), and Kagoshima University Museum (KAG). By consulting with the major taxonomic literature of Vietnam and adjoining countries (cited at Bibliography, pp. 69, 70), as well as herbarium specimens housed in VNM, FOF, and KAG, and those digitized images available at JSTOR Global Plants (<https://plants.jstor.org>), 118 species in 105 genera and 47 families are identified and here listed using field photographs and scanned images of herbarium specimens with short notes; *Phanera pulla* (Craib) Sinou & Bruneau, previously known only from Cambodia and Thailand, is here reported in Vietnam for the first time. In addition to the species here illustrated, there are several unidentified species which could be new to science, and we currently work on them to examine details and describe them.

# Map



**MAP.** A, map of Vietnam and adjoining countries. The yellow arrow indicates the location of Ninh Thuan Province; B, location of the Nui Chua National Park in Ninh Thuan Province; C, enlarged map of the national park. Each red circle indicates a collection site of specimens on our botanical survey.

In the map B and C, the coastlines, rivers, waters, and boundaries are displayed using vector data of OpenStreetMap (<https://www.openstreetmap.org> © OpenStreetMap contributors), under the Open Data Commons Open Database License (<https://openstreetmap.org/copyright>), extracted via overpass turbo (<https://overpass-turbo.eu/>). The contour lines are created using the ASTER Global Digital Elevation Model ver. 3 (NASA et al. 2019).

# How to Use This Book



- ① **Scientific name:** accepted name of the taxon, basically following Govaerts (2023); other references, if any, are indicated in **Notes:** of respective species.
- ② **Literature:** reference in which the scientific name was legitimately published.
- ③ **Vernacular name:** species name in Vietnamese.
- ④ **Family name:** following the latest internationally accepted classifications based on molecular phylogenetic analyses (PPG I 2016; APG IV 2016).
- ⑤ **Photographs:** photos of a habit, vegetative and reproductive organs taken in our field survey.
- ⑥ **Image of specimen:** a scanned image of a voucher specimen.
- ⑦ **Collection information:** collected elevation(s) of the voucher specimen(s), with their record number(s) and phenological stage(s). Abbreviations: fl., flower; flb., flower bud; fr., fruit.
- ⑧ **Distribution:** distribution in Vietnam, distribution in Indo-China outside Vietnam (Cambodia, Laos, Myanmar, and Thailand), and global distribution are shown, separated by semicolons respectively; distribution in Vietnam follows Checklist of plant species of Vietnam (Nguyen 2003, 2005), and distribution outside Vietnam follows POWO (2024) and taxonomic literature for each taxon cited in Bibliography (pp. 69, 70). Abbreviations: C, central; E, eastern; N, northern; S, southern; W, western.
- ⑨ **Notes:** a short description of the species: habits, habitats, abundance around the collection sites, morphological characteristics etc.

## Cyclopetis crenata (Fée) C.Chr.

Index Filic., Suppl. Tert.: 64 (1934) — VN Ráng lóng mô, Ráng áo long

## Lomariopsidaceae



▲ N375 (KAG186374)

- ◆ **Specimens:** 259 m (N375 [sporangia]).
- ◆ **Distribution:** Vietnam (N, C, S); Laos, Myanmar, Thailand; China (Hainan) to W & C Malesia.
- ◆ **Notes:** terrestrial ferns, 80 cm tall, occasional in understory of wet evergreen forest near streams; base of stipes densely covered with dark brown scales.

## Adiantum caudatum L.

Mant. Pl. 2: 308 (1771) — VN Ráng Nguyệt xỉ có đuôi, Tóc thần vẹ nữ có đuôi

## Pteridaceae



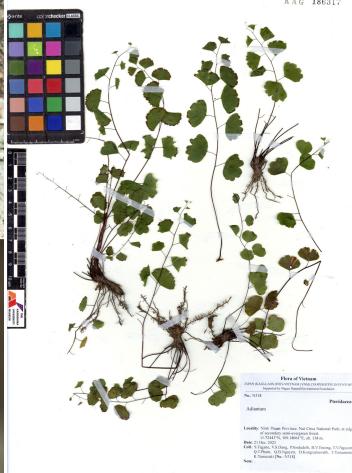
▲ N293 (KAG186292)

- ◆ **Specimens:** 202 m (N293 [sporangia]).
- ◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical & subtropical Asia to SW Pacific.
- ◆ **Notes:** terrestrial ferns, 10 cm tall, occasional in understory of lowland evergreen forest; leaves hairy, vegetatively propagate by buds at the leaf tip.

## **Adiantum semiorbiculatum** Bonap.

Pteridaceae

Notes Pteridol. 13: 105 (1921) — Nguyệt xi bán nguyệt, Ráng vê nữ bán nguyệt



▲ N318 (KAG186317)

◆ **Specimens:** 138 m (N318 [sporangia]).

◆ **Distribution:** Endemic to Vietnam (C).

◆ **Notes:** lithophytic ferns, 20 cm tall, occasional on semi-shaded rock walls on hill slope; pinnae broadly obovate to suborbicular, glabrous.

## **Hemionitis chusana** (Hook.) Christenh.

Pteridaceae

Global Fl. 4: 11 (2018) — Ráng thằn mô chu san, Ráng có mô chu



▲ N321 (KAG186320)

◆ **Specimens:** 138 m (N321 [sporangia]).

◆ **Distribution:** Vietnam (N, C); Laos; temperate E Asia to Philippines & Sulawesi.

◆ **Notes:** terrestrial or lithophytic ferns, scattered in open to semi-shaded areas at lower elevation; pinnae largest around the middle and gradually reduced proximally and distally.

# Pteris ensiformis Burm.f.

Fl. Ind.: 230 (1768) — VN Ráng seo gà hình gươm, Cò luồng

## Pteridaceae



▲ N330 (KAG186329)

◆ **Specimens:** 279 m (N330 [sporangia]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical & subtropical Asia to Pacific.

◆ **Notes:** terrestrial ferns, 30 cm tall, scattered in open to semi-shaded roadside areas; fronds dimorphic, i.e. different in shape between sterile and fertile fronds.

# Blepharis maderaspatensis (L.) B.Heyne ex Roth

Nov. Pl. Sp.: 320 (1821) — VN Tai rìa

## Acanthaceae



▲ N405 (KAG186404)

◆ **Specimens:** 85 m (N405 [fl.]), 228 m (N207 [fl.]).

◆ **Distribution:** Vietnam (C); Cambodia, Myanmar, Thailand; Africa to China (Hainan).

◆ **Notes:** Procumbent herbs on roadside open scrubs, grass field near trail; leaves normally 4-whorled, shorter than 4 cm.

## **Justicia gendarussa** Burm.f.

Fl. Indica: 10 (1768) — Thuốc trặc, Thanh táo

Acanthaceae



▲ N379 (KAG186378)

◆ **Specimens:** 274 m (N379 [fl.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical Asia.

◆ **Notes:** rheophytic subshrubs, 1.5 m tall, locally common along open rocky streams; observed mostly in flowering bud stage and will full-bloom in January.

## **Justicia quadrifaria** (Nees) T.Anderson

J. Linn. Soc., Bot. 9: 514 (1867) — Xuân tiết chè tư

Acanthaceae



▲ N195 (KAG186194)

◆ **Specimens:** 228 m (N195 [fl.]).

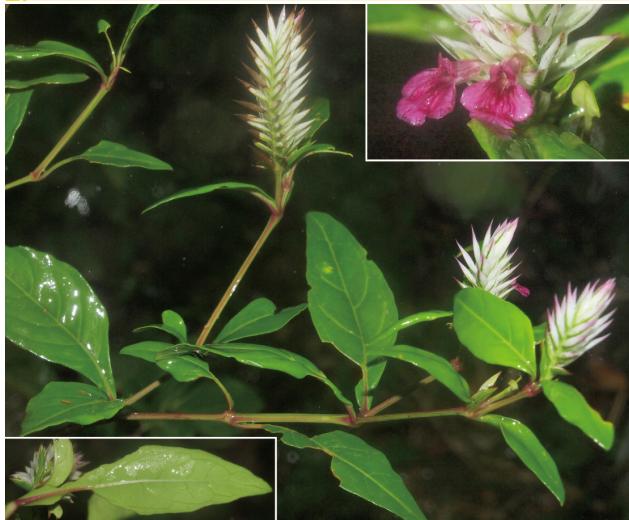
◆ **Distribution:** Vietnam (C, S); Laos, Myanmar, Thailand; E Nepal to S China & W Malesia.

◆ **Notes:** subshrubs on grass field near trail; well matched the type of *Justicia evrardii* Benoist (*Evrard 2393, P*), which is now treated as a synonym of *J. quadrifaria*.

## Lepidagathis mendax Benoist

Bull. Soc. Bot. France 81: 602 (1934) — VN Lân chùy lào

## Acanthaceae



▲ N246 (KAG186245)

◆ **Specimens:** 251 m (N246 [fl.]).

◆ **Distribution:** Endemic to Vietnam (C, S).

◆ **Notes:** herbs, 30 cm tall, found in dry evergreen forest at lowland; endemic species to Vietnam and its type from Nha Trang.

## Liquidambar excelsa (Noronha) Oken

Allg. Naturgesch. 3(3): 1539 (1841) — VN Tô hạp cao, An tiên cao

## Altingiaceae



▲ N377 (KAG186376)

◆ **Specimens:** 274 m (N377 [male and female fl. & fr.]).

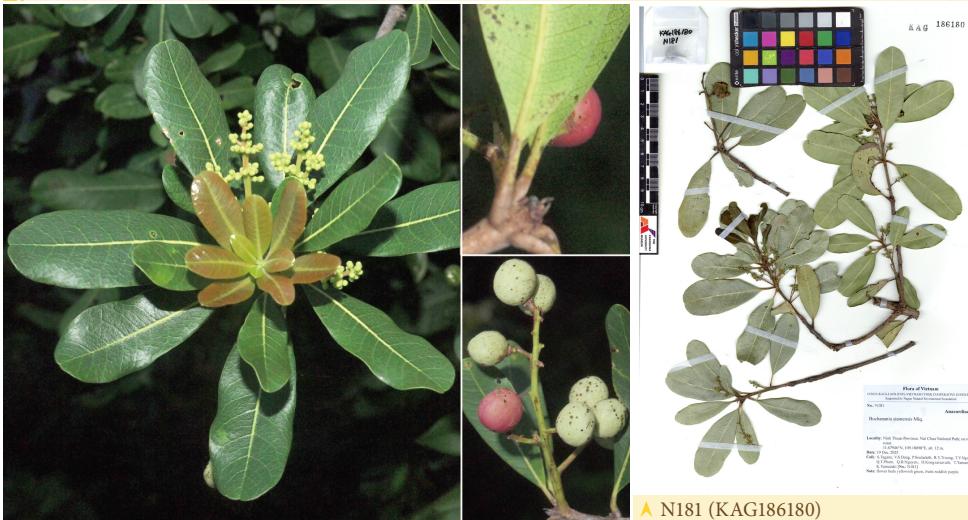
◆ **Distribution:** Vietnam (N); Cambodia, Laos, Myanmar, Thailand; Bhutan to S China & W Malesia.

◆ **Notes:** trees, monoecious, 20 m tall, scattered along open rocky streams; staminate inflorescence racemose, pistillate inflorescence capitate.

## Buchanania siamensis Miq.

Ann. Mus. Bot. Lugduno-Batavi 4: 118 (1869) — VN Chây xiêm

Anacardiaceae



▲ N181 (KAG186180)

◆ **Specimens:** 12 m (N181 [fl. & fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Thailand.

◆ **Notes:** trees, 8 m tall, occasional in arid forest, open sunny roadside thickets; leaf blades less than 10 cm long, rounded to emarginate at apex.

## Pentaspadon poilanei (Evrard & Tardieu) P.H.Hô

Cây cỏ Việt Nam 2(1): 474 (1992) — VN Ngũ liệt poilane, Vi hùng

Anacardiaceae



▲ N354 (KAG186353)

◆ **Specimens:** 40 m (N354 [fl. & young fr.]).

◆ **Distribution:** Vietnam (C); Laos.

◆ **Notes:** trees, 20 m tall, found one individual at evergreen forest edge beside dried river; inflorescence paniculate, to 30 cm long, flowers small, 5 mm in diam., fruits pale brown, lenticellate.

## Mitrephora pallens Jovet-Ast

Notul. Syst. (Paris) 9: 81 (1940) — VN Mạo dài tai

Annonaceae



▲ N183 (KAG186182)

◆ **Specimens:** 12 m (N183 [fr.]), 25 m (N221 [fr.]), 85 m (N409 [fl.]).

◆ **Distribution:** Endemic to Vietnam (C).

◆ **Notes:** trees, to 5 m tall, common in dry evergreen forest margin, often roadside, at lowland; outer petals 3, spread, inner petals 3, arched inwards to form a dome.

## Amphineurion marginatum (Roxb.) D.J.Middleton

Taxon 55: 502 (2006) — VN Luyến hương, Chè lồng

Apocynaceae



▲ N455 (KAG186454)

◆ **Specimens:** 230 m (N455 [young fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; tropical Asia to S China.

◆ **Notes:** woody climbers, scattered at edge of dry evergreen forest; fruits cylindric, to 40 cm long, ca. 1 cm width, seeds linear, with tuft of hairs (coma).

## Cerbera manghas L.

Sp. Pl.: 208 (1753) — Mướp xác huồng, Mật sát huường

Apocynaceae



▲ N230 (KAG186229)

◆ **Specimens:** 79 m (N230 [young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical Africa to Pacific.

◆ **Notes:** trees, 5 m tall, scattered in evergreen forest near sea coast; leaves alternate and crowded at branch-end, seeds without coma.

## Cynanchum viminale (L.) L.

Mant. Pl. 2: 392 (1771) — Tiết cǎn, Dây không lá

Apocynaceae



▲ N323 (KAG186322)

◆ **Specimens:** 156 m (N323 [fl.]).

◆ **Distribution:** Vietnam (N, C); Myanmar, Thailand; tropical & subtropical Old World.

◆ **Notes:** scandent to climbing herbs, found at open rocky streamside; easily recognized by its succulent stem, flowers sweetly scented.

## Streptocaulon juventas (Lour.) Merr.

Trans. Amer. Philos. Soc., n.s., 24(2): 315 (1935) — VN Hà Thủ ô nam, Hà thủ ô trắng

## Apocynaceae



▲ N178 (VNM00071230)

◆ **Specimens:** 15 m (N178 [young fr.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos, Myanmar, Thailand; S. China to Peninsular Malaysia.

◆ **Notes:** woody climbers, common in roadside thickets; stems, lower leaf surface, and fruits densely hairy.

## Arenga caudata (Lour.) H.E.Moore

Principes 4: 114 (1960) — VN Song châu bắc bộ, Song châu đuôi

## Arecaceae



▲ KAG 186228

◆ **Specimens:** 79 m (N229 [fr.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos, Myanmar, Thailand; S. China to Peninsular Malaysia.

◆ **Notes:** palms, 1.5 m tall, common in understory of humid evergreen forest, especially near rivers and streams; fruits subglobose, slightly flattened, ca. 1 cm in diam.

## Balanophora latisepala (Tiegh.) Lecomte

Fl. Indo-Chine 5: 228 (1915) — VN Du chó, Dó đất hình cầu

## Balanophoraceae



▲ N384 (KAG186383)

KAG 186383

Flora of Vietnam  
JOURNAL OF VIETNAMESE PLANT SYSTEMATICS  
No. 10, 2016

Balanophoraceae

Balanophora latiseptala (Tiegh.) Lecomte

Locality: Vịnh Bắc Bộ, Việt Nam. Station No.: 10

Date: 12.VII.1998. Collector: N. T. Trung, P. N. Phuoc, N. V. Trung, T. T. Ngoc.

Code: KAG 186383. Material: Herbarium specimen, dried, herbarium quality.

Note: Specimens herbarized.

◆ **Specimens:** 195 m (N384 [male and female fl.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Thailand; W Malesia.

◆ **Notes:** parasitic herbs, locally common in moist evergreen forest; plants dioecious, with female (left photo) and male (middle and right photos) inflorescences.

## Fernandoa serrata (Dop) Steenis

Blumea 23: 136 (1976) — VN Đinh vàng, Sò đỏ

## Bignoniaceae



▲ N308 (KAG186307)

KAG 186307

Flora of Vietnam  
JOURNAL OF VIETNAMESE PLANT SYSTEMATICS  
No. 10, 2016

Bignoniaceae

Fernandoa serrata (Dop) Steenis

Locality: Vịnh Bắc Bộ, Việt Nam. Station No.: 10

Date: 12.VII.1998. Collector: N. T. Trung, P. N. Phuoc, N. V. Trung, T. T. Ngoc.

Code: KAG 186307. Material: Herbarium specimen, dried, herbarium quality.

Note: Specimens herbarized.

◆ **Specimens:** 58 m (N308 [fl. & young fr.]), 85 m (N433 [young fr.]).

◆ **Distribution:** Endemic to Vietnam (N, C).

◆ **Notes:** trees, 10 m tall, occasional in dry areas at lowland, often common in roadside forest edge; leaves opposite, odd-pinnate (imparipinnate), up to 40 cm long, glabrous.

## **Millingtonia hortensis L.f.**

Suppl. Pl.: 291 (1782) — VN Đạt Phước, Đầu nhà trò

Bignoniaceae



▲ N452 (KAG186451)

◆ **Specimens:** 232 m (N452 [fl.]).

◆ **Distribution:** Vietnam (C, S); Laos, Myanmar, Thailand; S China to Malesia.

◆ **Notes:** trees, 20 m tall, found one flowering individual at forest edge on hill slope; leaves 2- or 3-pinnately compound, glabrous; flowers ca. 10 cm long, fragrant.

## **Ehretia microphylla Lam.**

Tabl. Encycl. 1: 425 (1792) — VN Cùm rüm lá nhô, Cùm rüm rắng

Boraginaceae



▲ N392 (KAG186391)

◆ **Specimens:** 30 m (N392 [fl. & young fr.]), 85 m (N404 [fl. & young fr.]), 209 m (N249 [fl.]).

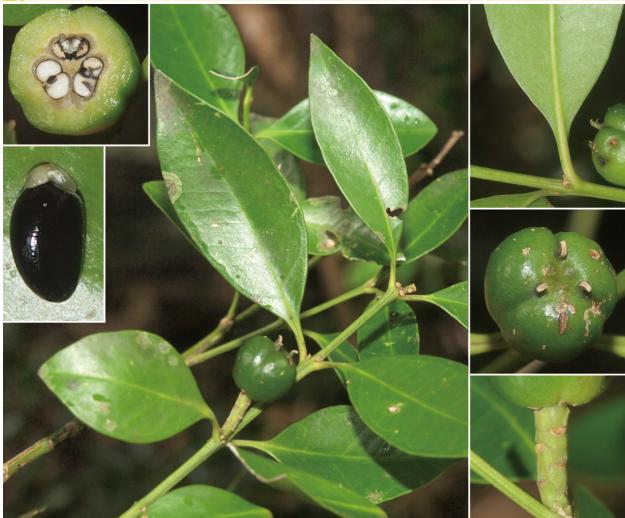
◆ **Distribution:** Vietnam (C, S); Cambodia, Myanmar, Thailand; India to Pacific.

◆ **Notes:** shrubby trees, common in open sunny areas such as arid forest, roadside thickets near sea coast; the species usually covered with short hairs, but glabrous form common in Nui Chua.

## **Buxus cochinchinensis** Pierre ex Gagnep.

**Buxaceae**

Bull. Soc. Bot. France 68: 481 (1921 publ. 1922) — **Hoàng dương nam bộ, Cà mà nam bộ**



▲ N326 (KAG186325)

- ◆ **Specimens:** 151 m (N326 [young fr.]).
- ◆ **Distribution:** Vietnam (C, S); Thailand; Peninsular Malaysia.
- ◆ **Notes:** trees, 6 m tall, occasional in evergreen forest on hill slope; leaves opposite, glabrous, fruits dry capsule, subglobose, with 3 persistent styles at apex.

## **Polycarphaea corymbosa** (L.) Lam.

**Caryophyllaceae**

Tabl. Encycl. 2: 129 (1797) — **Bạch cỏ định, Đa quả tàn phong**



▲ N471 (KAG186470)

- ◆ **Specimens:** 20 m (N471 [fl.]).
- ◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropics & subtropics.
- ◆ **Notes:** herbs, to 20 cm tall, locally common in open sunny places; leaves opposite, linear, usually 1 cm long.

# Gymnosporia diversifolia Maxim.

Bull. Acad. Imp. Sci. Saint-Pétersbourg, sér. 3, 27: 459 (1882) — VN Lôa châu biền, Chìa vôi

## Celastraceae



▲ N203 (KAG186202)

◆ **Specimens:** 30 m (N400 [flb. & young fr.]), 228 m (N203 [fl.]).

◆ **Distribution:** Vietnam (N, C); Laos, Thailand; S China, Japan (Nansei-shoto) to Lesser Sunda isls. (Flores).

◆ **Notes:** scandent to shrubby trees, common in open sunny areas such as arid forest, roadside thickets near sea coast; twigs spiny, fruits less than 1 cm long.

# Combretum deciduum Collett & Hemsl.

J. Linn. Soc., Bot. 25: 58 (1889) — VN Chun bău

## Combretaceae



▲ N464 (KAG186463)

◆ **Specimens:** 5 m (N464 [fl. & young fr.]).

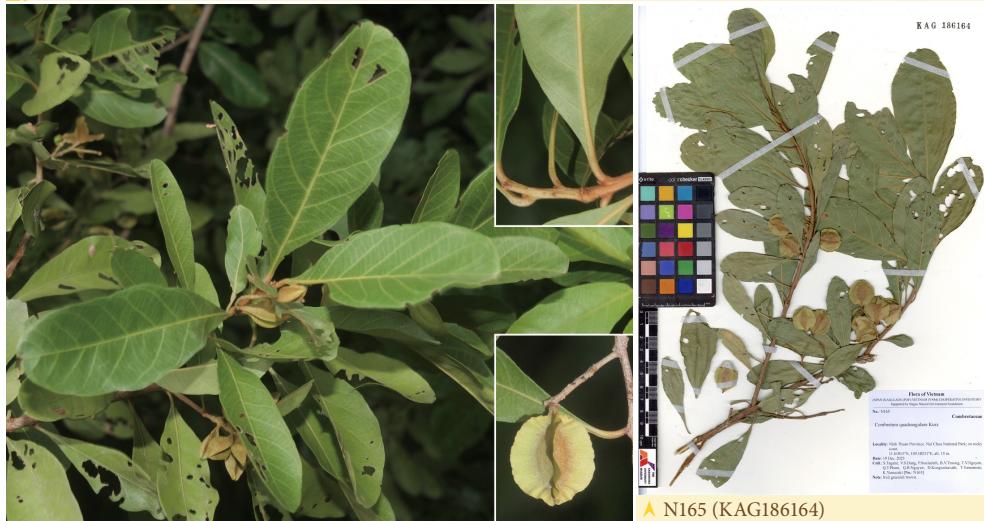
◆ **Distribution:** Vietnam (C); Myanmar, Thailand.

◆ **Notes:** scandent trees, 6 m tall, found roadside thickets near river mouth; leaves opposite, elliptic, less than 10 cm long, glabrous on both surfaces, inflorescence terminal.

## **Combretum quadrangulare** Kurz

J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 43: 188 (1874) — VN Chun bồ đề vuông, Trâm bồ

## Combretaceae



▲ N165 (KAG186164)

- ◆ **Specimens:** 15 m (N165 [fr.]).
- ◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand.
- ◆ **Notes:** trees, to 10 m tall, common in open sunny areas, secondary forest, roadside thickets; leaves elliptic to obovate, 6–16 cm long, inflorescence axillary and terminal.

## **Terminalia corticosa** Pierre ex Craib & Hutch.

Bull. Misc. Inform. Kew 1909: 358 (1909) — VN Chiêu liêu ôi, Cảm liên

## Combretaceae



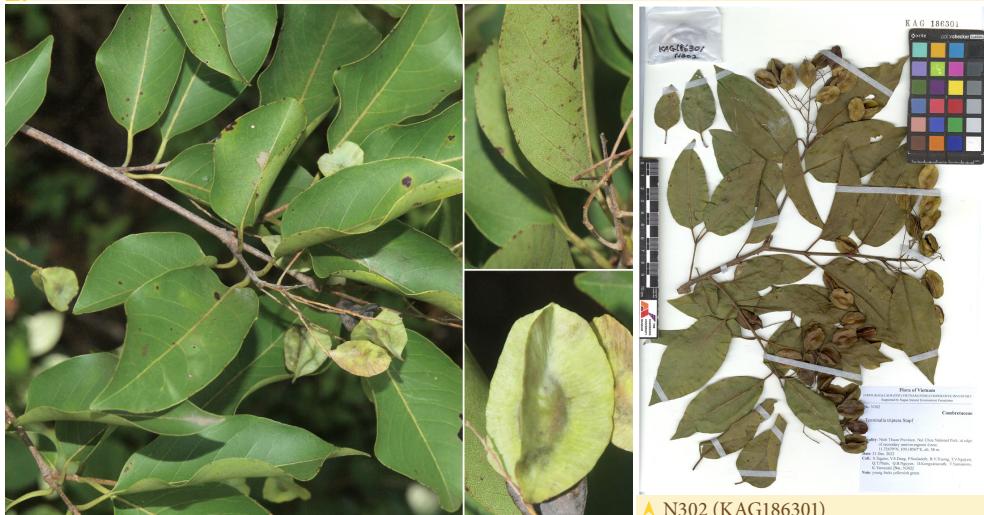
▲ N468 (KAG186467)

- ◆ **Specimens:** 20 m (N468 [fr.]).
- ◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Thailand.
- ◆ **Notes:** trees, 10 m tall, occasional in open dry forest at lowland; leaves opposite, usually crowded on short branch, obovate, apex obtuse to emarginate, fruits 2-winged.

## Terminalia triptera Stapf

Bull. Misc. Inform. Kew 1895: 103 (1895) — VN Chiêu liêu nghệ, Chiêu liêu dò

Combretaceae



▲ N302 (KAG186301)

◆ **Specimens:** 58 m (N302 [young fr.]).

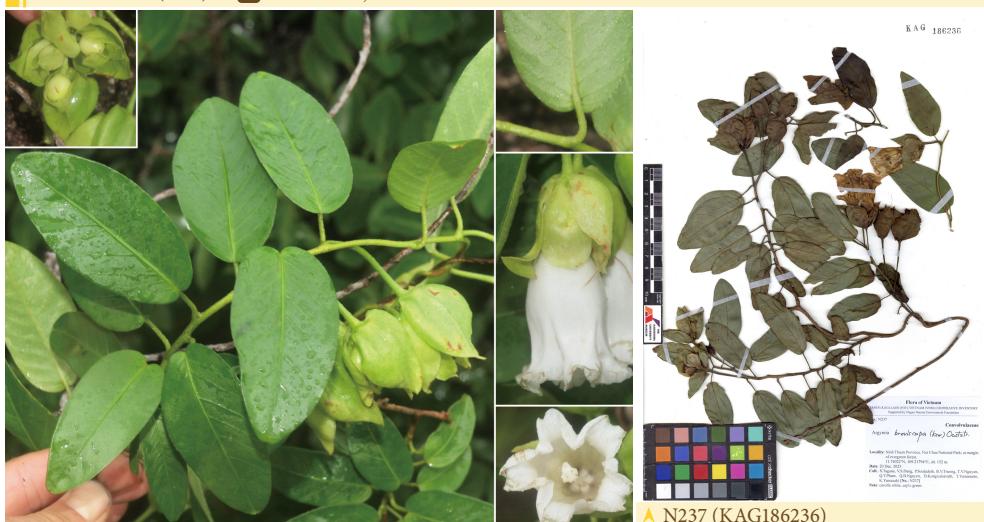
◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; China (Hainan) to Peninsular Malaysia.

◆ **Notes:** trees, 10 m tall, locally common in open dry forest near river; leaves opposite, ovate-elliptic, apex acute, fruits 3-winged.

## Argyreia breviscapa (Kerr) Ooststr.

Blumea 7: 178 (1952) — VN Bìm lá bắc, Bìm lá hoa

Convolvulaceae



▲ N237 (KAG186236)

◆ **Specimens:** 152 m (N237 [fl. & young fr.]).

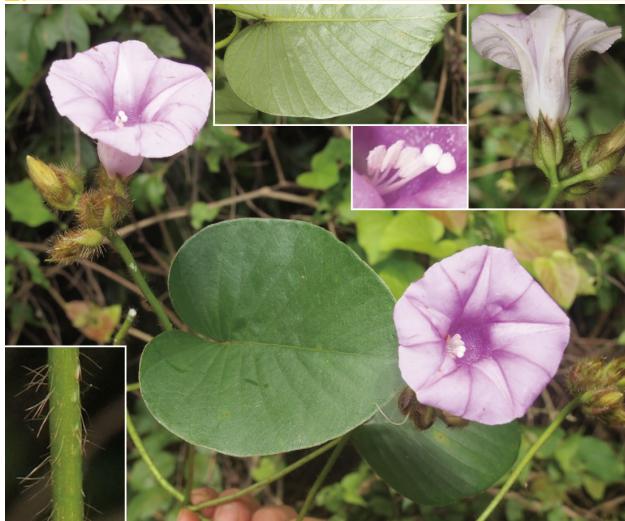
◆ **Distribution:** Vietnam (C); Cambodia, Laos, Thailand.

◆ **Notes:** woody climbers, scattered in open sunny areas; leaves ovate to ovate-oblong, up to 8 cm long, apex obtuse.

## **Argyreia capitiformis** (Poir.) Ooststr.

Fl. Males. 6: 941 (1972) — Bạc thau hoa dầu, Thảo bạc dầu

## Convolvulaceae



▲ N438 (KAG186437)

◆ **Specimens:** 502 m (N438 [fl.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; India to S China & W Malesia.

◆ **Notes:** woody climbers, scattered in evergreen forest margin; stems, leaves and inflorescence covered with stiffy hirsute hairs.

## **Cordisepalum thorellii** (Gagnep.) Verdc.

Kew Bull. 26: 138 (1971) — Ma coi

## Convolvulaceae



▲ N357 (KAG186356)

◆ **Specimens:** 247 m (N357 [young fr.]), 502 m (N441 [fl.]), 502 m (N458 [fr.]).

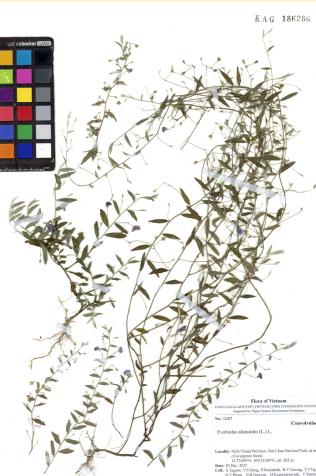
◆ **Distribution:** Vietnam (C); Cambodia, Laos, Thailand.

◆ **Notes:** woody climber, occasional in thickets and evergreen forest margin; inflorescence racemose, corolla lobes velutinous hairy on both surfaces.

## Evolvulus alsinoides (L.) L.

Sp. Pl. ed. 2.: 392 (1762) — VN Bất giao, Bất giao thon

## Convolvulaceae



▲ N287 (KAG186286)

◆ **Specimens:** 202 m (N287 [fl. & young fr.]).

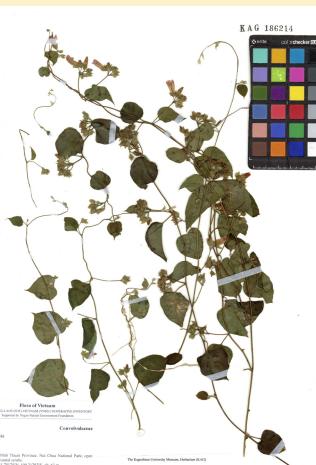
◆ **Distribution:** Vietnam (N, C); Cambodia, Laos, Myanmar, Thailand; tropics & subtropics.

◆ **Notes:** creeping or ascending herbs to 20 cm tall, common in grass field and evergreen forest margin; corolla rotate, ca. 8 mm in diam.

## Jacquemontia paniculata (Burm.f.) Hallier f.

Bot. Jahrb. Syst. 18: 95 (1893) — VN Bìm trắng

## Convolvulaceae



▲ N215 (KAG186214)

◆ **Specimens:** 63 m (N215 [fl.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos, Myanmar, Thailand; E Africa to Pacific.

◆ **Notes:** twining herbs, to 5 m tall, occasional in forest edge, open grassland; corolla funnelform, ca. 12 mm in diam.

## **Porana volubilis** Burm.f.

Fl. Indica: 51 (1768) — Bìm núi leo, Bìm Bìm núi

## Convolvulaceae



▲ N175 (KAG186174)

◆ **Specimens:** 15 m (N175 [fl. & young fr.]), 85 m (N403 [fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Thailand; Malesia.

◆ **Notes:** woody climbers, to 10 m tall, fairly common at roadside thickets, secondary forest margin at lowland; flowers fragrant, corolla 5-lobed.

## **Tridynamia bialata** (Kerr) Staples

Thai Forest Bull., Bot. 32: 149 (2004) — Tam đai

## Convolvulaceae



▲ N412 (KAG186411)

◆ **Specimens:** 85 m (N412 [fr.]).

◆ **Distribution:** Vietnam (C); Thailand.

◆ **Notes:** woody climbers, to 10 m tall, found one fruiting individual at secondary forest margin at 85 m elevation; two sepals greatly elongated for its wind-dispersal.

## Bulbostylis barbata (Rottb.) C.B.Clarke

in J.D.Hooker, Fl. Brit. India 6: 651 (1893) — Cói chát râu, Cỏ chát râu

## Cyperaceae



▲ N355 (KAG186354)

◆ **Specimens:** 40 m (N355 [young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Thailand; tropical & subtropical Old World to temperate E Asia.

◆ **Notes:** herbs, 15 cm tall, found on semi-shaded rocks near river; inflorescence terminal, capitate, with 3–15 sessile spikelets.

## Cyperus haspan L.

Sp. Pl.: 45 (1753) — Cói đầu đò, U du đầu đò

## Cyperaceae



▲ N286 (KAG186285)

◆ **Specimens:** 202 m (N286 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropics & subtropics.

◆ **Notes:** herbs, 20 cm tall, scattered in open wet areas; inflorescence a simple umbel, subtended by 1–5 spreading leafy bracts.

## Cyperus stoloniferus Retz.

Observ. Bot. 4: 10 (1786) — VN Cú biển, Cỏ gấu biển

Cyperaceae



▲ N463 (KAG186462)

◆ **Specimens:** 5 m (N463 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; Madagascar to Pacific.

◆ **Notes:** perennial herbs, 20 cm tall, locally common on sand beach inside bay; plants propagate vegetatively using long and thick rhizomes.

## Dillenia tetrapetala Joongku Lee, T.B.Tran & R.K.Choudhary

Ann. Bot. Fenn. 49: 372 (2012) — VN Sô

Dilleniaceae



▲ N362 (KAG186361)

◆ **Specimens:** 39 m (N362 [flb.]).

◆ **Distribution:** Endemic to Vietnam (C).

◆ **Notes:** trees, 10 m tall, common in riverside forest; the type locality is Hon Ba, ca. 50 km north from Nui Chua.

## Tetracera sarmentosa (L.) Vahl

Symb. Bot. 3: 70 (1794) — VN Chắc chiù, Dây chiều

## Dilleniaceae



▲ N255 (KAG186254)

◆ **Specimens:** 209 m (N255 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos, Myanmar, Thailand; S China, Sri Lanka to New Caledonia.

◆ **Notes:** woody climbers, common in forest edges, gaps, roadside thickets at lowland; flowers with 5 sepals and 1 glabrous carpel.

## Diospyros mun A.Chev. ex Lecomte

Notul. Syst. (Paris) 4: 108 (1928) — VN Mun

## Ebenaceae



▲ N182 (KAG186181)

◆ **Specimens:** 12 m (N182 [young fr.]), 58 m (N305 [young fr.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos (?).

◆ **Notes:** trees, 10 m tall, common in secondary forest at lowland; one of the dominant trees in the forests around park headquarters.

## **Cladogynos orientalis** Zipp. ex Span.

Linnaea 15: 349 (1841) — VN Tiết thu

Euphorbiaceae



▲ N266 (KAG186265)

◆ **Specimens:** 209 m (N266 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos, Myanmar, Thailand; S China to Malesia.

◆ **Notes:** shrubs, 1 m tall, scattered in evergreen forest margin at lower elevation; easily recognized by its white lower leaf surface.

## **Erismanthus sinensis** Oliv.

Hooker's Icon. Pl. 16: t. 1578 (1887) — VN Cò sán, Mao hoa trung quốc

Euphorbiaceae



▲ N366 (KAG186365)

◆ **Specimens:** 195 m (N366 [young fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Thailand; China (Hainan).

◆ **Notes:** trees, 10 m tall, common at riverside forest; easily recognized by its leaves opposite and shallowly obliquely cordate at base.



## Euphorbia antiquorum L.

Sp. Pl.: 450 (1753) — VN Xương rồng ông, Xương rồng ba cạnh

## Euphorbiaceae



▲ N225 (KAG186224)

◆ **Specimens:** 25 m (N225 [young fr.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos (?), Myanmar, Thailand; Pakistan to Jawa.

◆ **Notes:** succulent shrubs or treelets, to 5 m tall, scattered in arid forest, open sunny forest margin at lowland; plants with spines of 2–5 mm long.

## Excoecaria cochinchinensis Lour.

Fl. Cochinch.: 612 (1790) — VN Đơn đò, Đơn tía

## Euphorbiaceae



▲ N350 (KAG186349)

◆ **Specimens:** 247 m (N350 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C); Laos, Myanmar, Thailand; S China to Peninsular Malaysia.

◆ **Notes:** small trees, 1.5 m tall, found one individual in humid evergreen forest gaps; stem with white sap, leaves opposite.

## **Trigonostemon fragilis** (Gagnep.) Airy Shaw

Kew Bull. 32: 415 (1978) — Tam thụ hung đòn

## Euphorbiaceae



▲ N466 (KAG186465)

- ◆ **Specimens:** 20 m (N466 [male and female fl. & young fr.]).
- ◆ **Distribution:** Vietnam (C); China (Hainan).
- ◆ **Notes:** trees, 5 m tall, fairly common in arid forest near park headquarters; leaves alternate, often crowded on branch end, glabrous.

## **Tritaxis poilanei** (Gagnep.) R.Y.Yu & Welzen

Taxon 68: 933 (2019) — Đài luồng hình, Luồng hình dài

## Euphorbiaceae



▲ N361 (KAG186360)

- ◆ **Specimens:** 39 m (N361 [young fr.]), 79 m (N227 [fl.]), 247 m (N348 [fl.]).
- ◆ **Distribution:** Vietnam (C); China (Hainan).
- ◆ **Notes:** trees, 8 m tall, scattered in evergreen forest on hill slope and ridge; all part glabrous, midrib prominent on both surfaces.

## Abrus precatorius L.

Syst. Nat., ed. 12. 2: 472 (1767) — VN Dây cam thảo, Cườm thảo đò

Fabaceae



▲ N341 (KAG186340)

◆ **Specimens:** 58 m (N341 [fl. & young fr.]), 85 m (N408 [flb. & young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical & subtropical Old World to Australia.

◆ **Notes:** woody climbers, to 5 m tall, scattered in forest edge, secondary forest, roadside thickets; leaves even-pinnate (paripinnate), consisting of 8–13 pairs of leaflets, hairy on lower surface.

## Afzelia xylocarpa (Kurz) Craib

Bull. Misc. Inform. Kew 1912: 267 (1912) — VN Gõ đò

Fabaceae



▲ N426 (KAG186425)

◆ **Specimens:** 471 m (N426 [fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand.

◆ **Notes:** large trees, 25 m tall or more, scattered in evergreen forest near river as well as on hill slope; leaves with 3–5 pairs of elliptic to suborbicular leaflets, glabrous on both surfaces.

## **Albizia corniculata** (Lour.) Druce

Fabaceae

Rep. Bot. Soc. Exch. Club Brit. Isles 4: 603 (1916 publ. 1917) — VN Sông rắn sừng nhò, Cây muồng gai



▲ N469 (KAG186468)

◆ **Specimens:** 20 m (N469 [fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; S China to Philippines & Borneo.

◆ **Notes:** trees, 5 m tall, common in arid forest at lowland; originally described as *Albizia nigrescens* Gagnep. but the name synonymized with *A. corniculata*.

## **Albizia poilanei** I.C.Nielsen

Fabaceae

Adansonia, n.s., 19: 218 (1979) — VN Bàn xe poilane



▲ N457 (KAG186456)

◆ **Specimens:** 230 m (N457 [fr.]).

◆ **Distribution:** Endemic to Vietnam (C).

◆ **Notes:** trees, 15 m tall, found one individual in evergreen forest beside streams; characterized by its densely hairy leaves.

## **Crotalaria uncinella** subsp. **elliptica** (Roxb.) Polhill

Kew Bull. 25: 284 (1971) — VN Lục lặc móć

Fabaceae



▲ N174 (KAG186173)

◆ **Specimens:** 15 m (N174 [fl. & young fr.]).

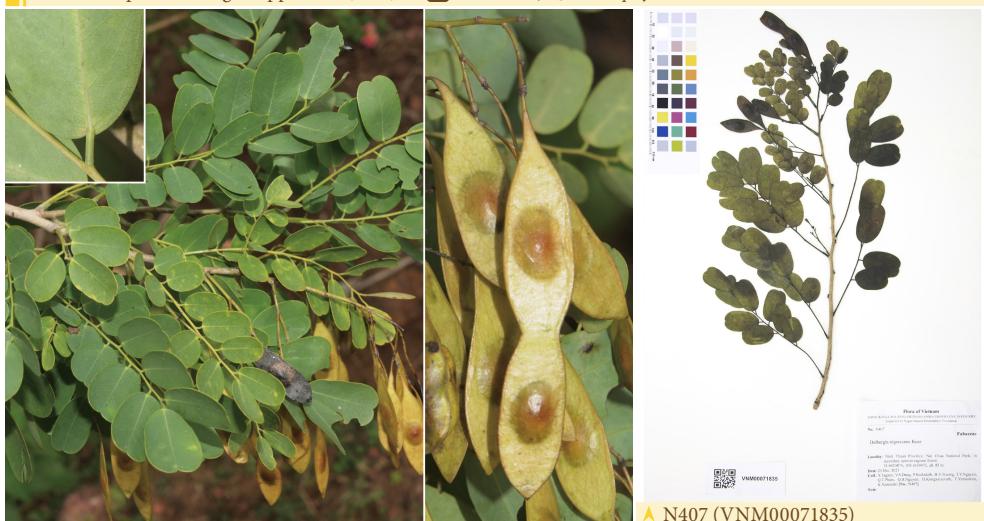
◆ **Distribution:** Vietnam (N, C, S); Thailand; Andaman Is., S China to Peninsular Malaysia.

◆ **Notes:** herbs, 30 cm tall, found at open areas near sea coast; leaves 3-foliate, leaflets to 3 cm long, abaxially pubescent.

## **Dalbergia nigrescens** Kurz

Prelim. Rep. Forest Pegu, App. A: 48 (1875) — VN Trắc đen, Quanh quach

Fabaceae



▲ N407 (VNM00071835)

◆ **Specimens:** 85 m (N407 [young fr.]).

◆ **Distribution:** Vietnam (N); Cambodia, Laos, Myanmar, Thailand.

◆ **Notes:** trees, 15 m all, occasional in dry areas at lowland; leaves imparipinnate, usually with 9–17 leaflets, blackish when dry.

## Dialium cochinchinense Pierre

Fl. Forest. Cochinch.: t. 384 A (1898) — VN Xây, Lá mêt

Fabaceae



▲ N327 (KAG186326)

◆ **Specimens:** 151 m (N327 [fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Thailand; W Malesia.

◆ **Notes:** trees, 25 m tall, locally common in evergreen forest on hill slope; fruits covered with black velvety hairs, pulp of fruits edible and sour.

## Entada glandulosa Pierre ex Gagnep.

Notul. Syst. (Paris) 2: 57 (1911) — VN Bảm bàm tuyến, Bảm bàm lá me

Fabaceae



▲ N199 (KAG186198)

◆ **Specimens:** 58 m (N315 [young fr.]), 228 m (N199 [young fr.]).

◆ **Distribution:** Vietnam (C); Cambodia, Laos, Myanmar, Thailand.

◆ **Notes:** woody climbers, to 30 m tall, occasional in forest margin; leaves bipinnate, glabrous, leaflets oblong-elliptic, slightly emarginate at apex.

## Ormocarpum cochinchinense (Lour.) Merr.

Philipp. J. Sci., C 5: 76 (1910) — VN Bồn bồn, Mạng quả

Fabaceae



▲ N295 (KAG186294)

◆ **Specimens:** 85 m (N406 [fl. & young fr.]), 202 m (N295 [fl. & young fr.]).

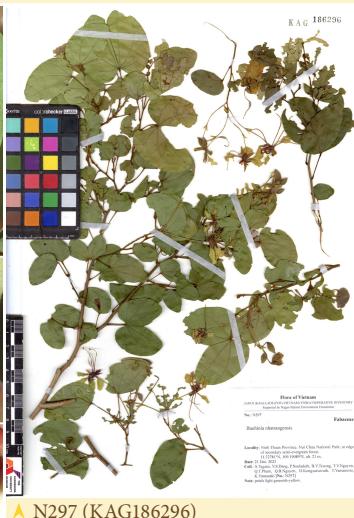
◆ **Distribution:** Vietnam (C, S); Thailand; tropical Asia to Japan (Nansei-shoto) & Pacific.

◆ **Notes:** trees, 6 m tall, occasional in secondary forest, arid forest, roadside thickets; leaves imparipinnate, 9–15-foliate, glabrous, leaflets less than 2.5 cm long, mucronate at apex.

## Phanera bracteata Benth.

in F.A.W.Miquel, Pl. Jungh.: 264 (1852) — VN Dây cánh dơi, Dây máu

Fabaceae



▲ N297 (KAG186296)

◆ **Specimens:** 21 m (N297 [fl. & young fr.]), 30 m (N398 [fl. & young fr.]), 151 m (N325 [fl.]).

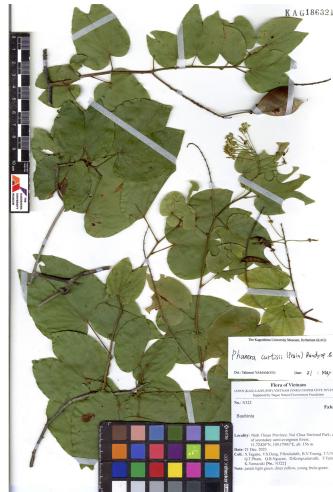
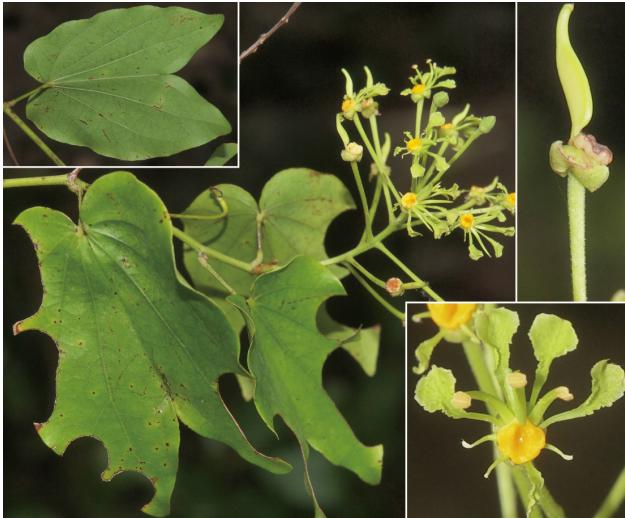
◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand.

◆ **Notes:** woody climbers, occasional at forest edge; perfectly matched *Bauhinia nhatrangensis* Gagnep. but *B. nhatrangensis* is synonymized with this species and we followed this concept at present.

## **Phanera curtisii** (Prain) Bandyop. & Ghoshal

Fabaceae

Telopea 18: 141 (2015) — Dây móng bò, Móng bò hoa xanh



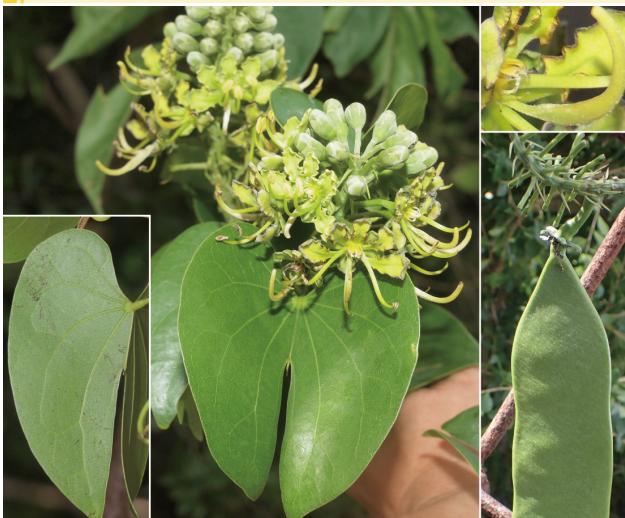
▲ N322 (KAG186321)

- ◆ **Specimens:** 156 m (N322 [fl. & young fr.]).
- ◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Thailand; Peninsular Malaysia.
- ◆ **Notes:** woody climbers, 10 m tall, found one individual at evergreen forest edge beside river; flowers small, less than 1 cm in diam.

## **Phanera pulla** (Craib) Sinou & Bruneau

Fabaceae

Taxon 69: 80 (2020) — Dây móng bò



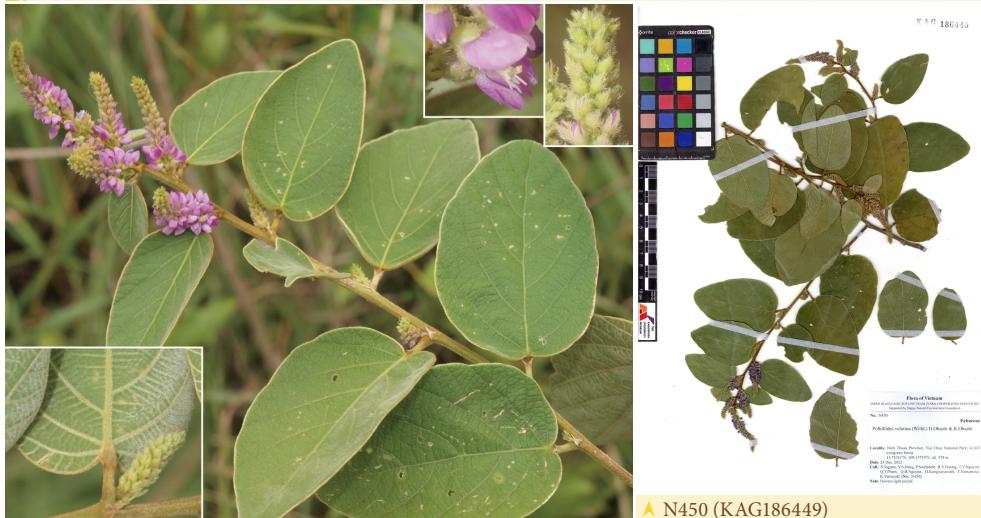
▲ N296 (KAG186295)

- ◆ **Specimens:** 21 m (N296 [fl. & young fr.]), 138 m (N339 [fl. & young fr.]), 193 m (N338 [fl.]).
- ◆ **Distribution:** Vietnam (C); Cambodia, Thailand.
- ◆ **Notes:** woody climbers, occasional at evergreen forest edge; leaves glabrous; recorded in Vietnam for the first time.

## Polhillides velutina (Willd.) H.Ohashi & K.Ohashi

J. Jap. Bot. 94: 72 (2019) — Hàn the ba hoa, Tràng quà ba hoa

Fabaceae



▲ N450 (KAG186449)

◆ **Specimens:** 578 m (N450 [fl.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical & subtropical Old World to Australia.

◆ **Notes:** shrubs to 1.5 m tall, locally common in open grassland, forest edge, roadside thickets at low to middle elevations.

## Tamarindus indica L.

Sp. Pl.: 34 (1753) — Me

Fabaceae



▲ N418 (KAG186417)

◆ **Specimens:** 119 m (N418 [fl.]).

◆ **Distribution:** Native to Comoros & Madagascar; widely cultivated in pantropics including Vietnam.

◆ **Notes:** trees, 20 m tall, found a few individuals along trail beside farmland; fruits edible and sour-sweet.

## **Tephrosia purpurea** (L.) Pers.

Syn. Pl. 2: 329 (1807) — Cốt khí tía, Đoàn kiểm tía

Fabaceae



▲ N173 (KAG186172)

◆ **Specimens:** 15 m (N173 [fl. & fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical & subtropical Old World to Pacific.

◆ **Notes:** perennial herbs, found one population in coastal area; legume linear, 3.4–4.2 cm long, ca. 4 mm wide.

## **Cratoxylum cochinchinense** (Lour.) Blume

Ann. Mus. Bot. Lugduno-Batavi 2: 17 (1856) — Thành ngạnh nam

Hypericaceae



▲ N268 (KAG186267)

◆ **Specimens:** 209 m (N268 [fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; S China to W, C Malesia.

◆ **Notes:** trees, 5 m tall, common in open dry woodland, secondary growth; fruits ca. 1.1 cm long, basal 3/5 covered by persistent calyx lobes.

## **Irvingia malayana** Oliv. ex A.W.Benn.

in J.D.Hooker, Fl. Brit. India 1: 522 (1875) — Cây, Kơ nia

## Irvingiaceae



▲ N267 (KAG186266)

◆ **Specimens:** 209 m (N267 [fl.]), 546 m (N445 [young fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; W Malesia.

◆ **Notes:** trees, 30 m tall, occasional in dry evergreen forest; fruits slightly flattened ellipsoid to subglobose, 3–4 cm long, ca. 3 cm in diam., glabrous.

## **Glossocarya mollis** Wall. ex Griff.

Calcutta J. Nat. Hist. 3: 366 (1843) — Thịt dê mềm

## Lamiaceae



▲ N402 (KAG186401)

◆ **Specimens:** 58 m (N312 [flb.]), 85 m (N402 [fl.]).

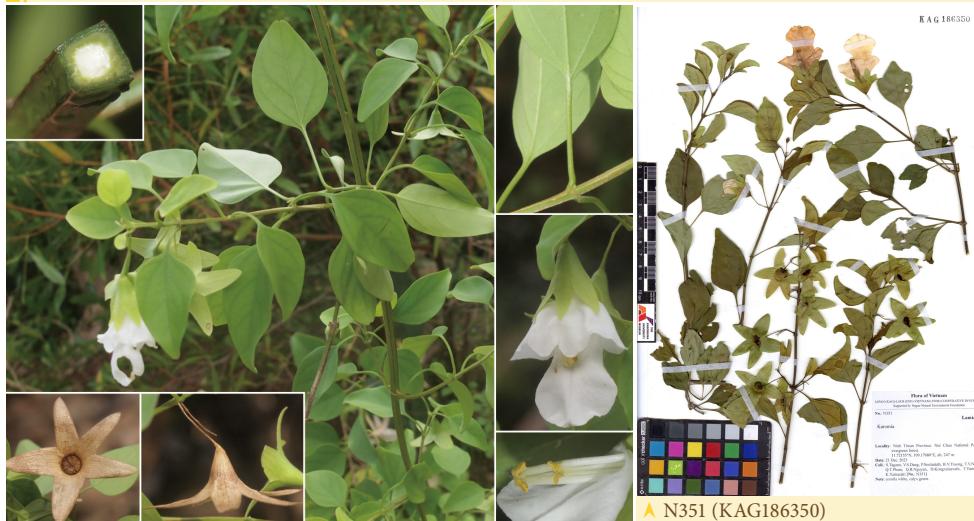
◆ **Distribution:** Vietnam (C); Myanmar, Thailand; Peninsular Malaysia, New Guinea.

◆ **Notes:** scandent shrubs to woody climbers, occasional at rocky walls on hills; leaves densely pubescent and without gland dots.

## ***Heliacria maritima*** Bo Li, C.L. Xiang, T.S. Hoang & Nuraliev

Lamiaceae

J. Trop. Subtrop. Bot. 31: [727-735] (2023) — Hạt đinh toàn tròn

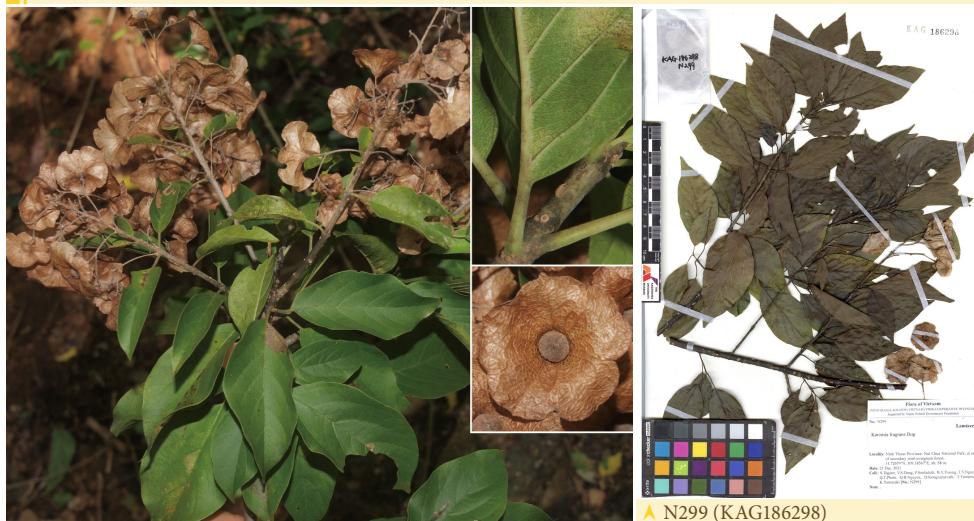


- ◆ **Specimens:** 40 m (N356 [fl. & fr.]), 152 m (N242 [flb. & young fr.]), 247 m (N351 [fl. & young fr.]).
- ◆ **Distribution:** Endemic to Vietnam (N, C).
- ◆ **Notes:** scandent shrubs, to 5 m tall, scattered in forest edges, open thickets, dried rocky riverside; taxonomic position had not been examined until recently, but described as a new genus just one month before our filed survey (Li et al. 2023).

## ***Karomia fragrans*** Dop

Lamiaceae

Bull. Mus. Natl. Hist. Nat., sér. 2, 4: 1053 (1932) — Cà diên



- ◆ **Specimens:** 58 m (N299 [fr.]).
- ◆ **Distribution:** Endemic to Vietnam (C).
- ◆ **Notes:** trees to 15 m tall, locally common in dry evergreen forest at lowland; fruits with persistent calyx that are rotate-patelliform and 5-lobed.

## Vitex negundo L.

Sp. Pl.: 638 (1753) — VN Hoàng kinh, Ngũ chàò

Lamiaceae



N428 (KAG186427)

◆ **Specimens:** 471 m (N428 [fl. & young fr.]).

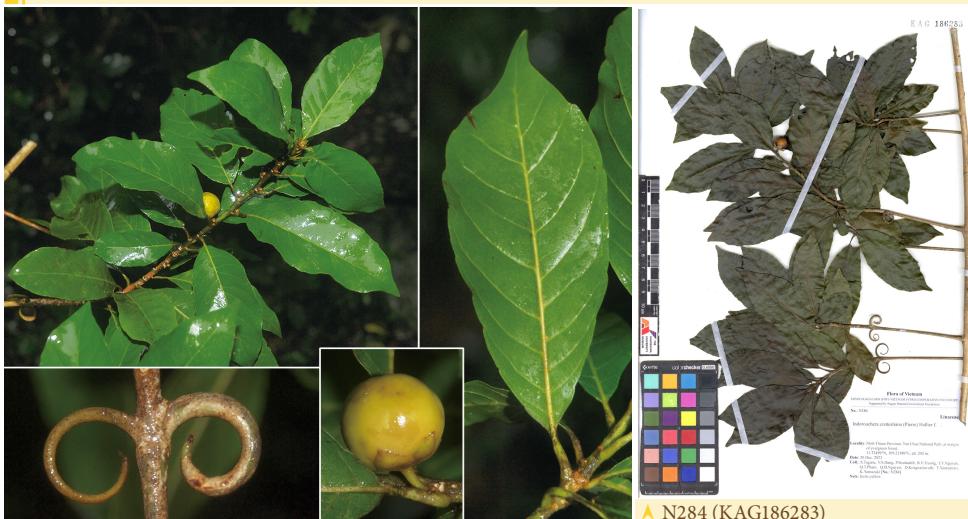
◆ **Distribution:** Vietnam (N, C, S); Cambodia, Myanmar, Thailand; E Africa, tropical & subtropical Asia to Pacific.

◆ **Notes:** trees, 6 m tall; one population found in disturbed evergreen forest on hill slope; leaves 5-foliolate, leaflets lanceolate, white abaxially.

## Indorouchera contestiana (Pierre) Hallier f.

Beih. Bot. Centralbl. 39(2): 49 (1921) — VN Vu sa

Linaceae



N284 (KAG186283)

◆ **Specimens:** 202 m (N284 [young fr.]).

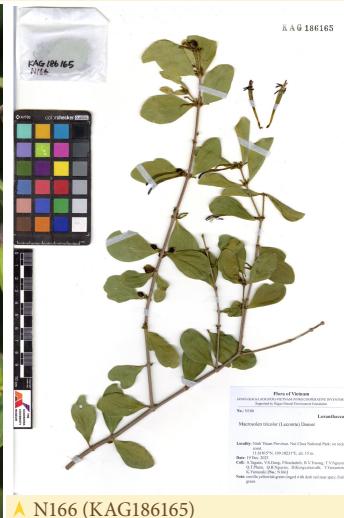
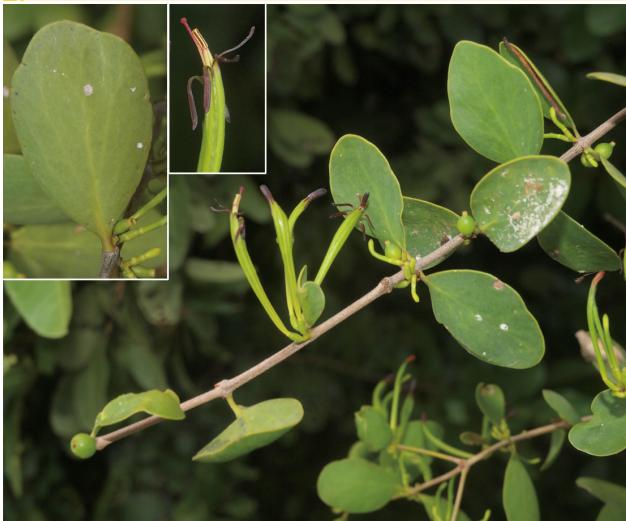
◆ **Distribution:** Vietnam (C, S); Cambodia; Borneo.

◆ **Notes:** woody climbers, scattered in evergreen forest at lowland, easily recognized by its slightly toothed leaf margins and hooks solitary or often in pairs.

## **Macrosolen tricolor** (Lecomte) Danser

Loranthaceae

Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 346 (1929) — 大理大叶寄生, 大理三色寄生



▲ N166 (KAG186165)

◆ **Specimens:** 15 m (N166 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos; S China.

◆ **Notes:** epiphytic and parasitic shrubs, occasional in lowland evergreen forest near coast; corolla lobes 6, strongly recurved in anthesis.

## **Scurrula notothixoides** (Hance) Danser

Loranthaceae

Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 352 (1929) — 摩克物种



▲ N389 (KAG186388)

◆ **Specimens:** 39 m (N389 [fl. & young fr.]), 228 m (N209 [fl.]).

◆ **Distribution:** Vietnam (C, S); S China.

◆ **Notes:** epiphytic and parasitic shrubs, locally common in evergreen forest; characterized by its small obovate leaves shorter than 3 cm, spatulate bracts ca. 3 mm long, and densely brownish stellate hairy corolla ca. 2.7 cm long.

## Taxillus chinensis (DC.) Danser

Bull. Jard. Bot. Buitenzorg, sér. 3, 16: 40 (1938) — Mộc vè trung quốc, Tâm gùi

Loranthaceae



▲ N417 (KAG186416)

◆ **Specimens:** 119 m (N417 [fl. & young fr.]).

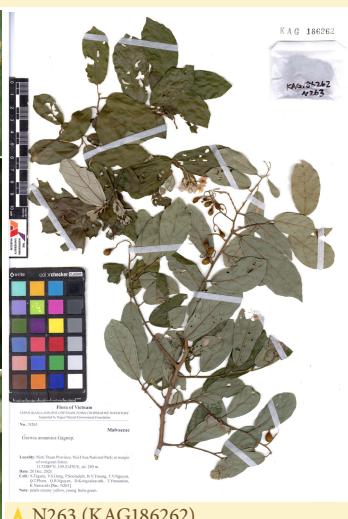
◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Thailand; S China to W Malesia.

◆ **Notes:** epiphytic and parasitic shrubs, occasional in lowland evergreen forest; corolla ca. 3 cm long, densely covered with adpressed stellate hairs.

## Grewia annamica Gagnep.

Bull. Soc. Bot. France 90: 69 (1943) — Cò ke trung bộ, Cò ke nam

Malvaceae



▲ N263 (KAG186262)

◆ **Specimens:** 209 m (N263 [fl. & young fr.]).

◆ **Distribution:** Endemic to Vietnam (C).

◆ **Notes:** shrubby trees, common in forest edge and gaps at lower elevation; leaves glaucous and thinner than *G. oligandra*.

## Grewia oligandra Pierre

Fl. Forest. Cochinch.: t. 163 (1888) — Giam thiều hung

Malvaceae



▲ N171 (KAG186170)

◆ **Specimens:** 15 m (N171 [fr.]), 119 m (N416 [fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; S China to Peninsular Malaysia.

◆ **Notes:** shrubs, often prostrate, 0.5–2 m tall, occasional in evergreen forest margin, open thickets near coast.

## Helicteres angustifolia L.

Sp. Pl.: 963 (1753) — Thâu kén lá hẹp, Ô kén

Malvaceae



▲ N288 (KAG186287)

◆ **Specimens:** 202 m (N288 [fl. & young fr.]), 228 m (N202 [flb. & young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; S China & Japan (Nansei-shoto) to Malesia.

◆ **Notes:** shrubs, up to 1.5 m tall, occasional in disturbed areas, open thickets; leaf blades narrowly oblong, shorter than 5 cm long.

## **Helicteres hirsuta** Lour.

Fl. Cochinch.: 530 (1790) — Tồ kén lông, Dó lông

**Malvaceae**



▲ N272 (KAG186271)

◆ **Specimens:** 202 m (N272 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; Assam to S. China, Philippines, Peninsular Malaysia.

◆ **Notes:** shrubs, scattered in forest edge, open thickets along trails; leaves densely tomentose, much larger than those of *H. angustifolia*.

## **Memecylon coeruleum** Jack

Malayan Misc. 1: 26 (1820) — Sầm lam

**Melastomataceae**



▲ N194 (KAG186193)

◆ **Specimens:** 228 m (N194 [young fr.]), 279 m (N329 [young fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; S China to Malesia.

◆ **Notes:** shrubs, 1.5 m tall, occasional in evergreen forest at lowland; leaf blades oblong-elliptic with rounded apex.

## **Memecylon octocostatum** Merr. & Chun

Sunyatsenia 2: 294 (1935) — VN Sầm tám sóng

Melastomataceae



▲ N196 (KAG186195)

◆ **Specimens:** 228 m (N196 [young fr.]).

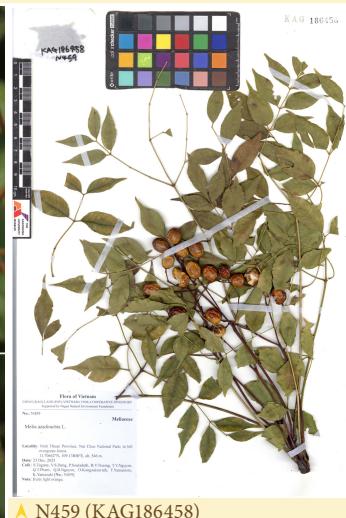
◆ **Distribution:** Vietnam (C); S China.

◆ **Notes:** shrubs, 5 m tall, locally common in evergreen forest on lowland hill; easily recognized by its small leaves and 8-ridged fruit.

## **Melia azedarach** L.

Sp. Pl.: 384 (1753) — VN Xoan, Sầu đông

Meliaceae



▲ N459 (KAG186458)

◆ **Specimens:** 546 m (N459 [fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Thailand; tropical & subtropical Asia to Australia.

◆ **Notes:** trees, 20 m tall, found only one individual on hill slope; leaves 2- or 3-pinnate, up to 40 cm long, leaflets opposite.

## Munronia pinnata (Wall.) W.Theob.

Burmah, ed. 3, 2: 581 (1883) — Mộc gỗ đị diệp, Mung rô đị diệp

## Meliaceae



▲ N367 (KAG186366)

◆ **Specimens:** 195 m (N367 [fl. & young fr.]).

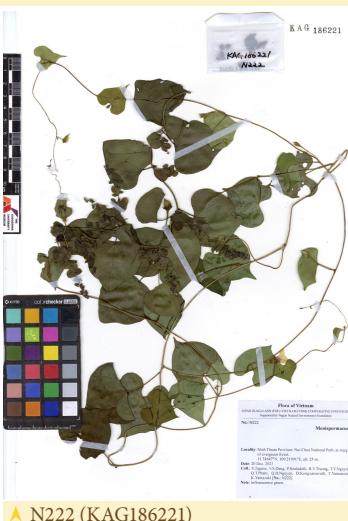
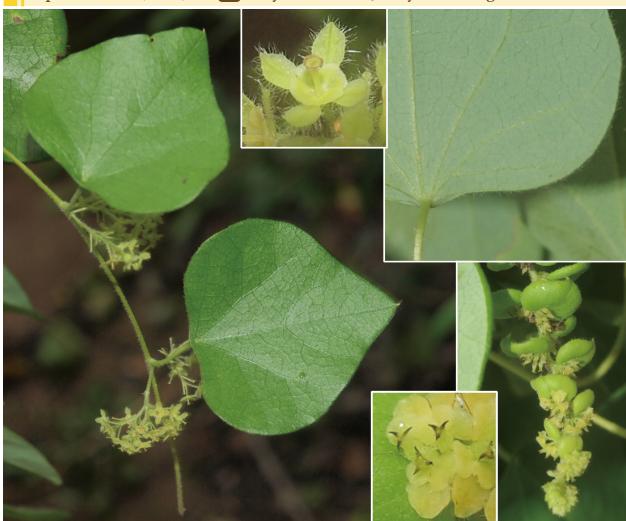
◆ **Distribution:** Vietnam (C); Myanmar, Thailand; India to S China, Peninsular Malaysia, Jawa to Lesser Sunda Isls..

◆ **Notes:** small trees, 20 cm tall, scattered in understory of wet evergreen forest along Nuoc Ngot River; widely distributed and known to be greatly variable in e.g. plant size, and number and size of leaflets.

## Cissampelos pareira L.

Sp. Pl.: 1031 (1753) — Dây sâm nam, Dây hồ đằng

## Menispermaceae



▲ N222 (KAG186221)

◆ **Specimens:** 25 m (N222 [female fl.]), 220 m (N423 [male fl.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; tropics & subtropics.

◆ **Notes:** climbers, occasional in evergreen forest margin; our collections are classified into var. *hirsuta* (Buch.-Ham. ex DC.) Forman.

## **Ficus pyriformis** Hook. & Arn.

Moraceae

Bot. Beechey Voy. 216 (1837) — Rù rì quả lê, Rù rì bái



▲ N381 (KAG186380)

◆ **Specimens:** 274 m (N381 [syconia]).

◆ **Distribution:** Vietnam (C); Cambodia, Laos, Myanmar, Thailand; Assam to S China.

◆ **Notes:** shrubs, 1.5 m tall, common along rocky streams; known as rheophyte and widely distributed in Indochina Peninsula.

## **Maclura cochinchinensis** (Lour.) Corner

Moraceae

Gard. Bull. Singapore 19: 239 (1962) — Mọ quả nam, Vàng lô



▲ N437 (KAG186436)

◆ **Specimens:** 502 m (N437 [young fr.]).

◆ **Distribution:** Vietnam (N, C); Cambodia, Laos, Myanmar, Thailand; W Himalaya to Japan, Malesia to New Caledonia.

◆ **Notes:** scandent shrubs, scattered in evergreen forest; often with thorns on branches and stems.

## Taxotrophis ilicifolia (Kurz) S.Vidal

Revis. Pl. Vasc. Filip.: 349 (1886) — VN Ruối ô rô, Ô ra núi

Moraceae



▲ N349 (KAG186348)

◆ **Specimens:** 247 m (N349 [young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; Assam to S China, Malesia.

◆ **Notes:** shrubby trees, 5 m tall, locally common in dry evergreen forest on hill ridge; leaf blades commonly with spiny teeth, but entire in old trees.

## Taxotrophis taxoides (B.Heyne ex Roth) Chew ex E.M.Gardner

Taxon 70: 979 (2021) — VN Ruối quít gai, Duối ba rắng

Moraceae



▲ N359 (KAG186358)

◆ **Specimens:** 39 m (N359 [fl.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; India to China (Hainan), W, C Malesia.

◆ **Notes:** shrubby trees, 3 m tall, locally common in evergreen forest on hill slopes; branchlets with thorns of ca. 1 cm long; leaves elliptic-oblong.

## **Syzygium oblatum** (Roxb.) Wall. ex A.M.Cowan & Cowan

Trees N. Bengal: 68 (1929) — Trâm ròng

**Myrtaceae**



▲ N258 (KAG186257)

◆ **Specimens:** 209 m (N258 [young fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; Assam to S China, W. Malesia.

◆ **Notes:** trees, 15 m tall, scattered in evergreen forest; intramarginal vein 1, ca. 1 mm apart from leaf margin.

## **Campylospermum serratum** (Gaertn.) Bittrich & M.C.E.Amaral

Taxon 43: 92 (1994) — Mai cánh lõm

**Ochnaceae**



▲ N371 (KAG186370)

◆ **Specimens:** 259 m (N371 [fr.]).

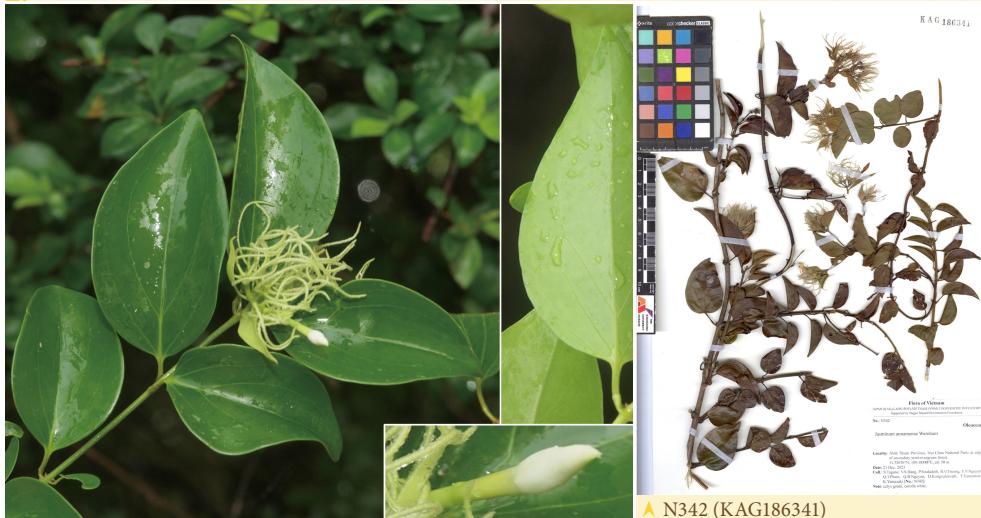
◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; India to China (Hainan), W, C Malesia.

◆ **Notes:** small trees, 2 m tall, occasional in wet evergreen forest along Nuoc Ngot River; leaves with 2 marginal veins.

## Jasminum annamense Wernham

J. Nat. Hist. Soc. Siam 4: 139 (1921) — VN Nhài trung bộ

Oleaceae



◆ **Specimens:** 58 m (N342 [flb.]).

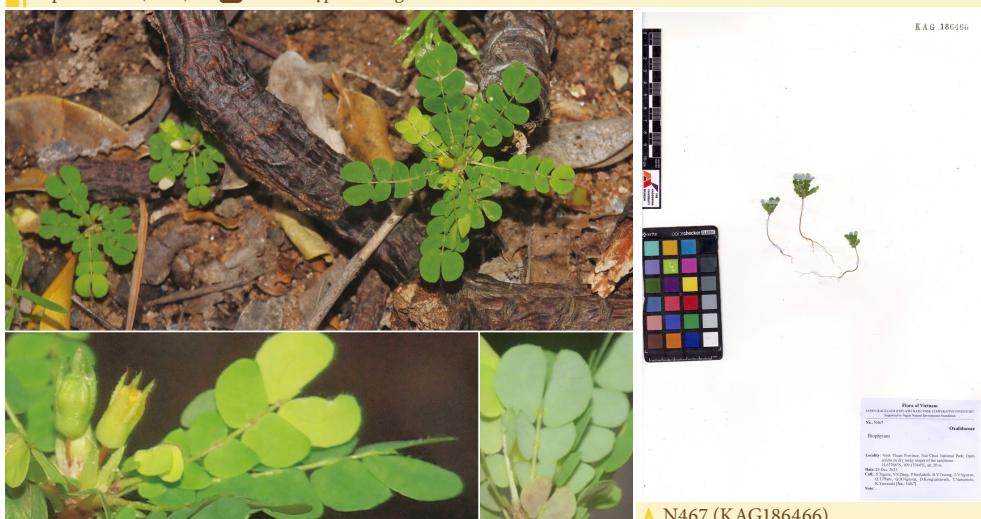
◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Thailand.

◆ **Notes:** woody climbers, scattered at evergreen forest edge and thickets on lowland to hill slopes; calyx linear, ca. 15 mm long, villous.

## Biophytum umbraculum Welw.

Apont.: 590 (1859) — VN Sinh diệp lá cong

Oxalidaceae



◆ **Specimens:** 20 m (N467 [flb.]).

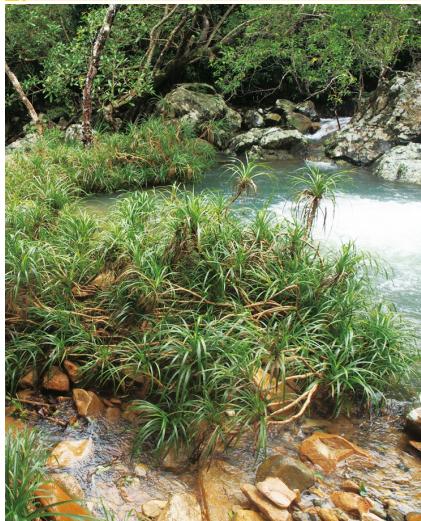
◆ **Distribution:** Vietnam (C, S); Cambodia, Myanmar, Thailand; tropical Africa, India to S China, Malesia to Queensland.

◆ **Notes:** small herbs, 5 cm tall, locally common in open areas at lowland; leaves crowded on stem apex, paripinnate, flowers yellow, with short pedicel 2–3 mm long.

## **Pandanus fibrosus** Gagnep.

## **Pandanaceae**

Notul. Syst. (Paris) 6: 177 (1938) — Dứa nước, Dứa sợi



▲ N380 (KAG186379)

◆ **Specimens:** 274 m (N380 [young fr.]).

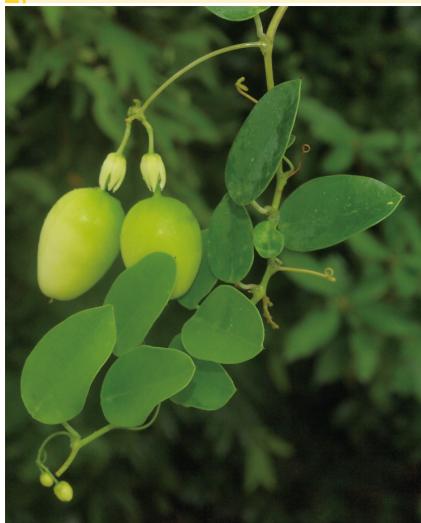
◆ **Distribution:** Vietnam (C); Laos, Thailand; Hainan, Taiwan.

◆ **Notes:** rheophytic subshrubs, common along streams; fruits erect when young, maturing pendulous.

## **Adenia poilanei** C.Cusset

## **Passifloraceae**

Fl. Camb., Laos & Vietn. 5: 150 (1967) — Thủ diệp poilane



▲ N206 (KAG186205)

◆ **Specimens:** 228 m (N206 [flb. & young fr.]).

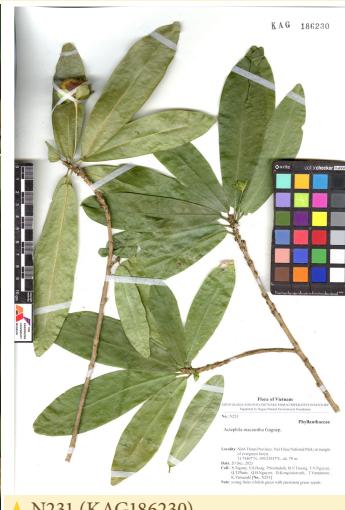
◆ **Distribution:** Endemic to Vietnam (C).

◆ **Notes:** herbaceous climbers, scattered in evergreen forest margin; known only from the type locality (Nha Trang) and its vicinity.

## **Actephila macrantha** Gagnep.

Bull. Soc. Bot. France 72: 459 (1925) — VN Da gà đầu tròn, Da gà hoa to

## Phyllanthaceae



▲ N231 (KAG186230)

◆ **Specimens:** 79 m (N231 [fl. & young fr.]), 279 m (N335 [fl. & young fr.]).

◆ **Distribution:** Endemic to Vietnam (C).

◆ **Notes:** trees, 4 m tall, locally common in evergreen forest on hills; petals absent, sepals enlarged in fruiting.

## **Antidesma ghaesembilla** Gaertn.

Fruct. Sem. Pl. 1: 189 (1788) — VN Chòi mòi, Xô con

## Phyllanthaceae



▲ N451 (KAG186450)

◆ **Specimens:** 578 m (N451 [fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical & subtropical Asia to Vanuatu.

◆ **Notes:** small trees, 2 m tall, occasional in dry evergreen forest, open grassland on hill slope; distinguished from the other species of *Antidesma* in Vietnam by its oblong to oblong-obovate lamina with shallowly cordate to rounded base.

## Breynia coriacea Beille

in H.Lecomte, Fl. Indo-Chine 5: 638 (1927) — VN Dé dai, Bồ cu vè lá dài

## Phyllanthaceae



▲ N390 (KAG186389)

- ◆ **Specimens:** 30 m (N390 [fl. & fr.]), 202 m (N273 [fr.]), 502 m (N440 [fl. & young fr.]).
- ◆ **Distribution:** Endemic to Vietnam (N, C, S).
- ◆ **Notes:** shrubs, 1 m tall, fairly common in disturbed areas, open thickets, evergreen forest edge; ovaries exserted from calyx at anthesis, apex enlarged and concave; styles shortly or barely divided into 2 branchlets.

## Bridelia parvifolia Kuntze

Revis. Gen. Pl. 2: 594 (1891) — VN Gai nò, Đồm lá nhô

## Phyllanthaceae



▲ N180 (KAG186179)

- ◆ **Specimens:** 15 m (N180 [fl. & young fr.]), 58 m (N310 [fl.]).
- ◆ **Distribution:** Vietnam (C); China (Hainan).
- ◆ **Notes:** shrubs, scandent, 4 m tall, locally common in secondary forest; leaves broadly elliptic to obovate, with 5–8(–9) pairs of lateral veins.

## Cathetus fasciculata Lour.

## Phyllanthaceae

Syst. Veg., ed. 16, 3: 21 (1826) — VN Me chum, Diệp hạ châu chum



- ◆ **Specimens:** 39 m (N387 [fl. & young fr.]).
- ◆ **Distribution:** Vietnam (N, C); Cambodia, Laos; Tibet to Japan (Nansei-shoto).
- ◆ **Notes:** scandent or creeping shrubs, locally fairly common in roadside forest edge at lowland; synonymized as *Phyllanthus cochinchinensis* Spreng. in Govaerts (2023), but here follows Bouman (2022).

## Kirganelia microcarpa (Benth.) Hurus. & Yu.Tanaka

## Phyllanthaceae

Fl. E. Himal.: 179 (1966) — VN Phèn đen



- ◆ **Specimens:** 220 m (N432 [fl. & fr.]).
- ◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Thailand; S China to W Malesia.
- ◆ **Notes:** scandent shrubs, occasional in roadside thickets, open forest gaps; synonymized as *Phyllanthus microcarpus* (Benth.) Müll.Arg. in Govaerts (2023), but here follows Bouman (2022).

## **Synostemon bacciformis** (L.) G.L.Webster

Taxon 9: 26 (1960) — VN Ngót biển quả mập, Liên hùng quả mập

## **Phyllanthaceae**



▲ N172 (KAG186171)

◆ **Specimens:** 15 m (N172 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Myanmar, Thailand; Indian Ocean, tropical & subtropical Asia.

◆ **Notes:** herbs or subshrubs, to 30 cm tall, found in open coastal areas; typical along or near sunny beaches on saline soil, but also recorded at wet, grassy roadsides of inland.

## **Polygala polifolia** C.Presl

Reliq. Haenk. 2: 101 (1835) — VN Viễn chi bông ngắn, Kích nhũ chùm ngắn

## **Polygalaceae**



▲ N395 (KAG186394)

◆ **Specimens:** 30 m (N395 [fl.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Thailand; tropical & subtropical Asia to Caroline Isls.

◆ **Notes:** herbs, to 15 cm tall, occasional in open pastureland near sea.

## Ziziphus oenopolia (L.) Mill.

Gard. Dict., ed. 8.: n.º 3 (1768) — 桃子 Táo rùng, Táo dại

Rhamnaceae



▲ N179 (KAG186178)

◆ **Specimens:** 15 m (N179 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; S China, tropical Asia to Australia.

◆ **Notes:** scadent shrubs, common in disturbed areas, open dry thickets; young branches and lower leaf surface densely covered with yellow-brown hairs.

## Catunaregam tomentosa (Blume ex DC.) Tirveng.

Taxon 27: 515 (1978 publ. 1979) — 桂 Găng nhung, Găng trắng

Rubiaceae



▲ N277 (KAG186276)

◆ **Specimens:** 202 m (N277 [fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Laos, Myanmar, Thailand; W Malesia.

◆ **Notes:** shrubby trees, 3 m tall, scattered in open sunny areas; branches hard, sometimes thorn-like, fruits densely covered by hairs.

## Hymenodictyon orixense (Roxb.) Mabb.

Rubiaceae

Taxon 31: 66 (1982) — VN Võ dùt, Võng mạc



▲ N313 (KAG186312)

◆ **Specimens:** 58 m (N313 [young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; W Himalaya to S China & Philippines.

◆ **Notes:** trees, 5 m tall, occasional in open rocky area; the genus name *Hymenodictyon* refers to the characters of its membrane around the seeds.

## Oldenlandia paniculata L.

Rubiaceae

Sp. Pl.: 1667 (1753) — VN An đỉền hai hoa



▲ N399 (KAG186398)

◆ **Specimens:** 15 m (N176 [fr.]), 30 m (N399 [fl. & fr.]).

◆ **Distribution:** Vietnam (N, C, S); Thailand; S China to W, C Malesia.

◆ **Notes:** herbs, to 20 cm tall, locally common in open grass field and thickets near sea.

# **Psychotria laui** Merr. & F.P.Metcalf

Lingnan Sci. J. 16: 403 (1937) — VN Trồn trồn lau

Rubiaceae



▲ N370 (KAG186369)

◆ **Specimens:** 259 m (N370 [young fr.]).

◆ **Distribution:** Vietnam (C); China (Hainan).

◆ **Notes:** shrubs, 1.5 m tall, scattered in wet evergreen forest along Nuoc Ngot River; stem and leaves glabrous.

# **Pyrostria cochinchinensis** (Pierre ex Pit.) Utteridge & A.P.Davis

Kew Bull. 64: 751 (2009 publ. 2010) — VN Gặng vàng nam bộ, Cặng nam bộ

Rubiaceae



▲ N187 (KAG186186)

◆ **Specimens:** 25 m (N220 [fl. & young fr.]), 212 m (N187 [fl. & young fr.]).

◆ **Distribution:** Vietnam (C, S); Thailand; Peninsular Malaysia & Borneo.

◆ **Notes:** trees, 5 m tall, common in evergreen forest from lowland to hill ridges; originally described as a species of *Canthium* but later transferred to *Pyrostria* (Utteridge and Davis 2009).

# **Atalantia citroides** Pierre ex Guillaumin

Notul. Syst. (Paris) 1: 178 (1910) — VN Chanh rừng, Tiêu quật chanh

Rutaceae



▲ N347 (KAG186346)

- ◆ **Specimens:** 247 m (N347 [young fr.]).
- ◆ **Distribution:** Vietnam (C, S); Cambodia.
- ◆ **Notes:** shrubby trees, 4 m tall, occasional in evergreen forest on hill ridges; venation prominent on both surfaces when dry.

# **Bergera koenigii** L.

Mant. Pl.: 565 (1767) — VN Chùm hôi trắng, Nguyệt quế

Rutaceae



▲ N344 (KAG186347)

- ◆ **Specimens:** 247 m (N344 [fl. & young fr.]).
- ◆ **Distribution:** Vietnam (C); Cambodia, Laos, Thailand; Pakistan to S China & Peninsular Malaysia.
- ◆ **Notes:** trees, scattered in evergreen forest; widely used as a spice, aromatic oil, medicine etc; flowers fragrant.

## Harrisonia perforata (Blanco) Merr.

Philipp. J. Sci., C 7: 236 (1912) — Đa đà, Dây hải sơn

Rutaceae



▲ N260 (KAG186259)

◆ **Specimens:** 209 m (N260 [young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; Bangladesh to C Malesia.

◆ **Notes:** scandent shrubs, common in dry open forest at lowland; stem and branches usually with thorns, rachis of imparipinnate leaves winged.

## Micromelum minutum (G.Forst.) Wight & Arn.

Prodri. Fl. Ind. Orient. 1: 468 (1834) — Kim Sương, Chùng hôi trắng

Rutaceae



▲ N188 (KAG186187)

◆ **Specimens:** 212 m (N188 [flb.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropical & subtropical Asia to W Pacific.

◆ **Notes:** shrubs, to 4 m tall, occasional in forest edges, roadside thickets; widely and commonly found in disturbed areas in continental SE Asia.

## **Zanthoxylum avicennae** (Lam.) DC.

Rutaceae

Prod. 1: 726 (1824) — Muồng trúòng, Sèn



▲ N265 (KAG186264)

◆ **Specimens:** 25 m (N213 [fl.]), 209 m (N265 [fl. & fr.]).

◆ **Distribution:** Vietnam (N, C); Laos, Thailand; S China to W, C Malesia.

◆ **Notes:** shrubs, 3 m tall, occasional in evergreen forest margin, roadside thickets; seeds ca. 4 mm in diam., black, shiny.

## **Viscum indosinense** Danser

Santalaceae

Bull. Jard. Bot. Buitenzorg, sér. 3, 16: 51 (1938) — Ghi đông dương



▲ N333 (KAG186332)

◆ **Specimens:** 279 m (N333 [young fr.]).

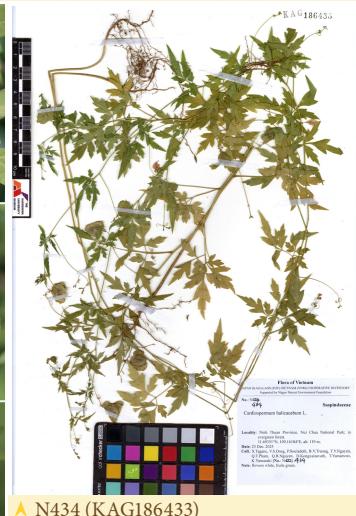
◆ **Distribution:** Vietnam (C); Thailand.

◆ **Notes:** epiphytic and parasitic shrubs, scattered in evergreen forest; easily recognized by its opposite and small leaves (blades 0.7–1.4 cm long).

## **Cardiospermum halicacabum L.**

Sp. Pl.: 366 (1753) — VN Tâm phong, Chùm phong

Sapindaceae



▲ N434 (KAG186433)

◆ **Specimens:** 119 m (N434 [fl. & young fr.]).

◆ **Distribution:** Vietnam (N, C, S); Cambodia, Laos, Myanmar, Thailand; tropics & subtropics.

◆ **Notes:** herbaceous climbers, common in evergreen forest margin, roadside thickets; easily recognized by its binate leaves triangular in outline and balloon-like fruits.

## **Dodonaea viscosa Jacq.**

Enum. Syst. Pl.: 19 (1760) — VN Chành ràng, Rù ri

Sapindaceae



▲ N248 (KAG186247)

◆ **Specimens:** 209 m (N248 [fl. & young fr.]).

◆ **Distribution:** Vietnam (C, S); Myanmar, Thailand; tropics & subtropics.

◆ **Notes:** shrubs, 2 m tall or more, fairly common in disturbed areas; flowers lack petals, fruits 2-(or 3-)winged.

## **Manilkara hexandra** (Roxb.) Dubard

Ann. Mus. Colon. Marseille, sér. 3, 3: 9 (1915) — VN Găng, Găng néo

Sapotaceae



▲ N233 (KAG186232)

◆ **Specimens:** 152 m (N233 [fl. & young fr.]).

◆ **Distribution:** Vietnam (C, S); Cambodia, Myanmar, Thailand; India to S China & Peninsular Malaysia.

◆ **Notes:** trees, to 10 m tall, locally common and one of dominant trees in stunted evergreen forests near sea; can be recognized by usually recurved leaf margin and emarginate apex, and parallel secondary veins.

## **Solanum camranhense** Dy Phon & Hul

Fl. Camb., Laos & Vietn. 35: 16 (2014) — VN Củ bè

Solanaceae



▲ N257 (KAG186256)

◆ **Specimens:** 209 m (N257 [fl.]).

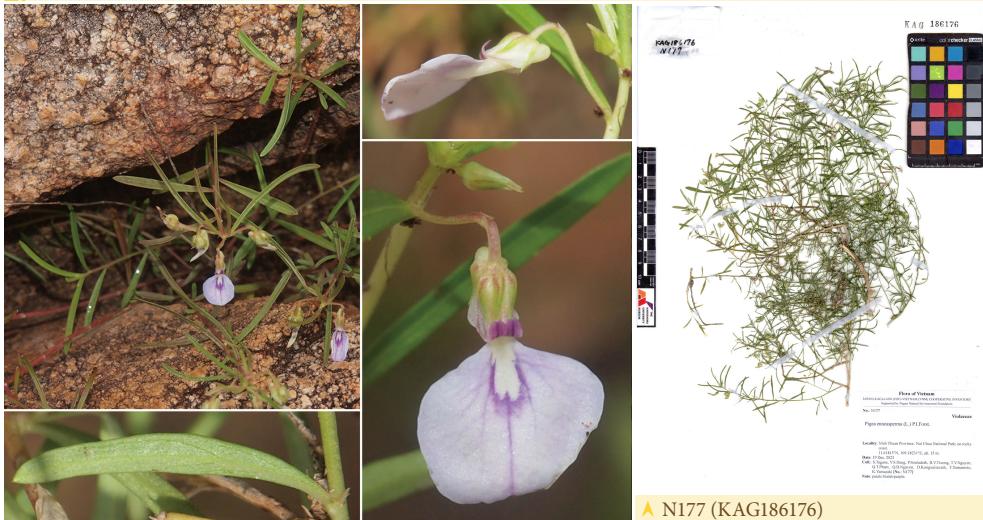
◆ **Distribution:** Endemic to Vietnam (C).

◆ **Notes:** shrubs, to 1.5 m tall, occasional in thickets, evergreen forest edge at lowland; fruits globose, ca. 1 cm in diam., glabrous.

## Pigea enneasperma (L.) P.I.Forst.

Austrobaileya 11: 29 (2021) — Cỏ tím phòng

Violaceae



▲ N177 (KAG186176)

◆ **Specimens:** 15 m (N177 [fl. & young fr.]), 30 m (N394 [fl. & fr.]).

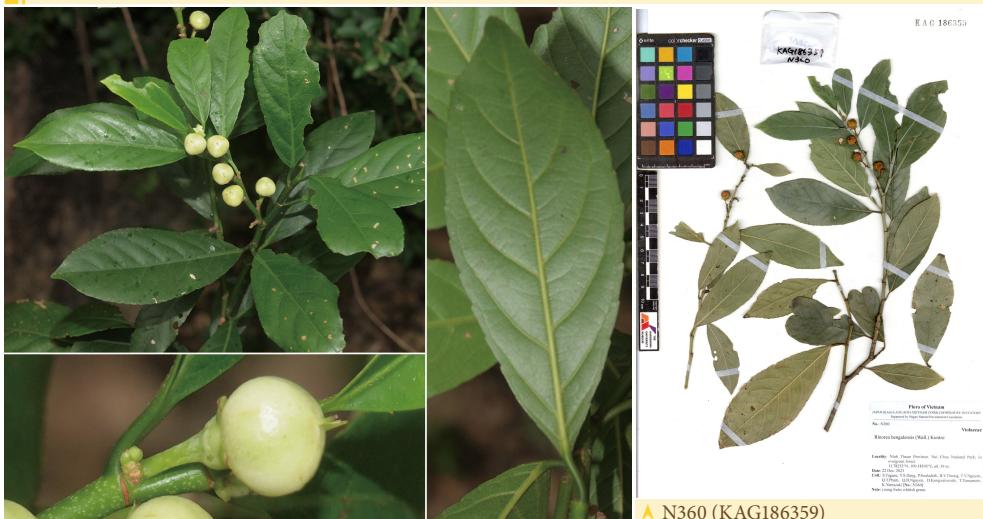
◆ **Distribution:** Vietnam (N, C); Thailand; tropical & subtropical Old World to Australia.

◆ **Notes:** small herbs, 5–25 cm tall, common in open dry thorny woodland near sea coast; originally described as a species of *Viola* by Linnaeus, then had classified into the genus *Hybanthus* or *Afrohybanthus*.

## Rinorea bengalensis (Wall.) Kuntze

Revis. Gen. Pl. 1: 42 (1891) — Kê nao nhẵn, Quần diệp

Violaceae



▲ N360 (KAG186359)

◆ **Specimens:** 39 m (N360 [young fr.]), 152 m (N239 [young fr.]).

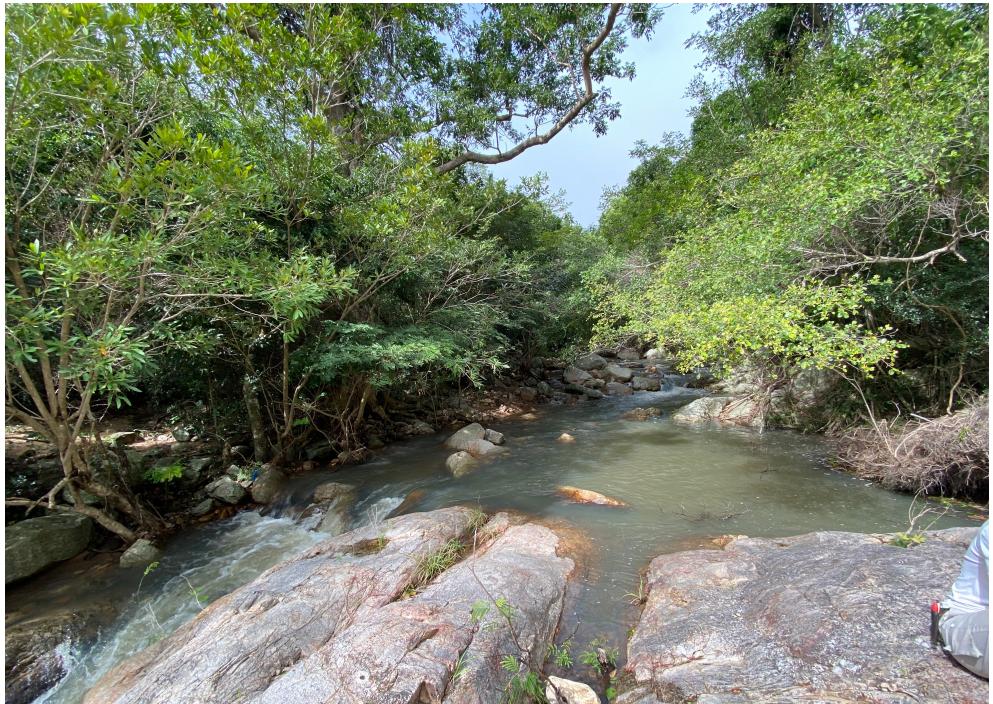
◆ **Distribution:** Vietnam (N, C); Cambodia, Laos, Myanmar, Thailand; S China to tropical Asia & W Pacific.

◆ **Notes:** shrubs, 1 m tall, common in lowland evergreen forest; all parts glabrous; easily recognized by its green twigs with conspicuous scar of stipules; widely distributed and known to be quite variable in tree height and leaf size.

## Field Photos



Dry thorny scrubland near coast, resulted from cattle grazing (30 m asl, 22 Dec. 2023)



Semi-evergreen forest along a stream (220 m asl, 23 Dec. 2023)



Secondary deciduous forest (95 m asl, 23 Dec. 2023)



Group photo of the field survey team, coastal scrubland behind (25 m asl, 20 Dec. 2023)

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- Scanned images of herbarium specimens
- Scientific name, Vietnamese name, distribution and observation notes



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