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Faunistic Studies in South-east Asian and Pacific Island Odonata

Journal of the International Dragonfly Fund

1-73

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& Jafet Potenzo Lopes**

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published 30.12.2018

No. 25

ISSN 2195-4534

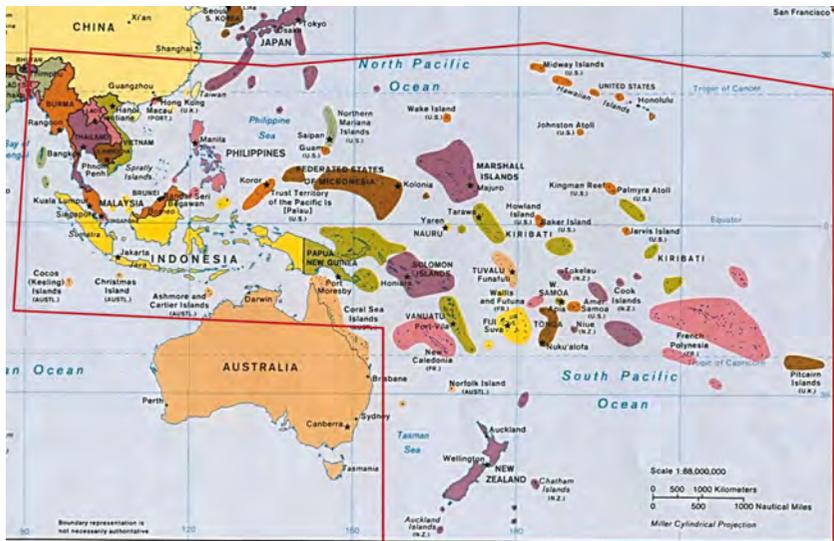
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Editorial Work: Martin Schorr, Milen Marinov and Rory Dow
Layout: Martin Schorr
IDF-home page: Holger Hunger
Printing: Colour Connection GmbH, Frankfurt
Impressum: Publisher: International Dragonfly Fund e.V., Schulstr. 7B, 54314 Zerf, Germany. E-mail: oestlap@online.de
Responsible editor: Martin Schorr
Cover picture: *Rhincocypha pagenstecheri timorana* male, 29-ix-2018, Oelulan, Oecusse SAR, Timor-Leste
Photographer: Rui Miguel da Siva Pinto

Further records of Odonata from Timor Island, with the first photographs of living *Nososticta impercepta* (Odonata: Platycnemididae) and additional records from Rote and Romang Islands

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Abstract

We present an annotated list of 28 Odonata species (19 Anisoptera, 9 Zygoptera) from Timor Island based on 464 records via photographs and 56 specimens held in collections at the Museum and Art Gallery of the Northern Territory, Darwin, Australia and the Museum Wiesbaden, Germany. Additionally 43 records of eight species (7 Anisoptera, 1 Zygoptera) from Rote Island and one record from Romang were reported. Most Timorese records are from Oecusse Special Administrative Region/Timor-Leste, a region which to date was "terra incognita". Further records from Timor-Leste are predominantly from Lautem Municipality and Baucau Municipality as well as from the Indonesian Kupang Regency. Four species are new records for Timor Island increasing the checklist to 40 species: *Brachythemis contaminata* (Fabricius, 1793), *Tholymis tillarga* (Fabricius, 1798), *Gynacantha* sp. cf. *dobsoni* Fraser, 1951 and *Ischnura aurora* (Brauer, 1865). We provide the first photographs of live *Nososticta impercepta* Seehausen & Theischinger, 2017 as well as some descriptions of habitats in Oecusse. At Rote Island five species were reported for the first time as well: *Brachythemis contaminata*, *Crocothemis servilia* (Drury, 1773), *Rhyothemis phyllis* (Sulzer, 1776), *Macrodiplax cora* (Brauer, 1867) and *Potamarcha congener* (Rambur, 1842). The record of *Orthetrum testaceum* (Burmeister, 1839) from Romang Island appears to be the first Odonata documented from this island. The status of *Rhyothemis phyllis* is discussed with regard to the ssp.

ixias Lieftinck, 1953 from the islands of Sumba and Flores. We provide distribution maps of each species as well as suggestions for targeted field research in the future. All historical records of *Nososticta selysii* (Förster, 1896) from Timor are now assigned to *Nososticta impercepta*.

Key words: Lesser Sunda Islands; *Orthetrum testaceum soembanum*; *Rhyothemis phyllis ixias*; *Gynacantha dobsoni*; crepuscular

Introduction

The Odonata fauna of Timor Island still is poorly known. A recent update by Seehausen (2017b) was based on collections held in different museums as well as a review of some older records. As a result he provided a preliminary checklist of 36 species including nine reported from Timor for the first time. However, it was suggested that there was still much more potential for Odonata from Timor Island and the findings of Seehausen (2017a) and Seehausen & Theischinger (2017) indicate that it might even be possible to discover undescribed species. Thus every record of Odonata from Timor is important and increasing the faunistic knowledge of this island which is mostly "terra incognita" for Odonata.

In 2018 collaboration between the authors developed in order to get more knowledge about the Timorese Odonata fauna. A lot of dragon- and damselflies were photographed and identified – mainly from Oecusse Special Administrative Region (SAR)/Timor-Leste and from Lautem Municipality/Timor-Leste but also from Kupang Regency/Indonesian West Timor, Rote Island/Indonesia (just 12 km off southwest Timor Island) and further Timorese area. The records from Oecusse SAR, an exclave of Timor-Leste situated in the northern part of Indonesian West Timor, are the first ever documented from this 813 km² region. Records from Lautem Municipality were already known due to the sampling of the Australian Museum in 2012 (Seehausen 2017b) but the recent findings increase the local faunal list of this easternmost region of Timor-Leste. Several historical records of Odonata were known from the southwestern region of Indonesian West Timor and Rote Island (Lieftinck 1936, Lieftinck 1953, Seehausen 2017b) but none in recent decades. In the case of Rote Island, Lieftinck (1953) was apparently the only one who reported Odonata from the island listing five species without specified locality: *Pseudagrion microcephalum* (Rambur, 1842), *Ischnura senegalensis* (Rambur, 1842), *Orthetrum sabina* (Drury, 1773), *Diplacodes trivialis* (Rambur, 1842) and *Pantala flavescens* (Fabricius, 1798).

Material and method

Our report is based on 464 records of 28 species (19 Anisoptera, 9 Zygoptera) from Timor Island, 43 records of eight species (7 Anisoptera, 1 Zygoptera) from Rote Island and one record (1 Anisoptera) from Romang Island. Most of the records concern photographs taken and uploaded to the online database iNaturalist (www.inaturalist.com) by Rui Miguel da Silva Pinto (RMSP), Jafet Potenzo Lopes (JPL) as well as Colin Richard Trainor (CRT). Photographs were viewed and identified (or confirmed) by Malte Seehausen (MS). Additionally we include 52 Odonata specimens collected in October 1973 by Tom Weir in Portuguese Timor (now Timor-Leste) and held at the

Museum and Art Gallery of the Northern Territory, Darwin, Australia (MAGNT), as well as four specimens collected in April 2016 around Mount Mutis in Indonesian West Timor and held at the Museum Wiesbaden, Natural History Collection, Wiesbaden, Germany (MWNH). Photographs of MAGNT specimens were taken by CRT, and those and specimens held at MWNH were viewed and identified by MS. The records from Timor refer to the Indonesian Regencies Kupang (39 records) and South Central Timor (4) as well as to the Timor-Leste Municipalities of Aileu (18), Ainaro (1), Baucau (46), Dili (59), Ermera (4), Lautem (144), Oecusse SAR (203) and Viqueque (1). Records based on photographs do not necessarily represent the true quantity of individuals for each species at the localities.

Appendix 1 provides full data of each record including geographic coordinates, sex and URL to the pictures. All the records are summarized in the annotated species list.

Appendix 2 provides distribution maps for each species hitherto reported from Timor Island as well as for the species currently recorded on Rote and Romang Island in order to give an overview of the present knowledge and to evaluate prospective sightings. Beside the recent records, the distribution maps include previously published records with specified localities of Asahina (1990), Lieftinck (1936, 1953), Ris (1913a, b, 1916), Polhemus & Helgen (2004), Seehausen (2017a, b) and Seehausen & Theischinger (2017) as well as additional specimens held at the Natural History Museum of Basel (NMB). All historical records of *Nososticta selysii* (Förster, 1896) from Timor are now assigned to *Nososticta impercepta* Seehausen & Theischinger, 2017. Imprecise data like "Timor" or "Portuguese Timor" as in Hagen (1863, 1869), Lieftinck (1931, 1933) and Ris (1909a, 1912) are not included except in *Tetrathemis irregularis hyalina* Kirby, 1889, *Tramea loewii* (Brauer, 1866) and *Zygonyx ida* Selys, 1869 because for these species these are the only available records. The historical locality "Amarassi" is a large region south of Kupang. In case of Alfred Bühler we could specify the locality: According to Barrkmann (2017) who analysed Bühler's diary, he collected around Baun village in western Amarasi.

Appendix 3 provides a table with the seasonal distribution of the historical and recent records from Timor and Rote Island.

Climate and landscape: The publication of Seehausen (2017b) lacks general information about climate and landscapes of Timor Island. Thus we like to give some annotations already published by Trainor, Coates & Bishop (2007a) and Trainor et al. (2007b) – mainly concerning Timor-Leste but not totally different in West Timor. Generally Timor has a tropical climate drier than most of the western Lesser Sunda Islands and with comparatively few permanent freshwater wetlands. For example towns such as Manatuto and Vermasse are among the driest regions in SE Asia. The north coast rainy season begins with the west monsoon in November and December and produces 4-6 months of rain (less than 1000 mm per year) whereas the south coast of Timor has two peaks in the rainy season – the first in December due to the west monsoon and the second peak from April to June due to the south-east trade winds with a total of 7-9 month of rain (more than 2000 mm per year). The central mountain region as well as the Fuiloro plateau around Los Palos/Lautem Municipality have rainfall of more than 2000 mm per year, the highest usually in May and June. The annual precipitation rate of Oecusse SAR is 1000-2500 mm and, as in many regions of Timor, some areas

and villages become isolated in the rainy season because of flooding. The temperature depends on elevation, in the coastal lowlands the daytime temperature is about 31-33°C (20-25°C at night) while the temperature decreases about 4-5°C with each 1000 m of elevation and e.g. Maubisse/Ainaro Municipality (1400 m a.s.l.) has a comparatively cool climate with temperatures of 23-28°C at daytime (10-20°C at night).

The landscape of Timor is characterized by hills and mountains, especially the central east-west mountain range with many peaks over 1000 m a.s.l. and among the highest the Mount Tatamailau/Ainaro and Ermera Municipality (2963 m a.s.l.), followed by Mount Mutis/South Central Timor Regency (2428 m a.s.l.) and Mount Matebian/Baucau Municipality (2316 m a.s.l.). Savannas or open forest and bush land are extensive along the north coast as well as narrow coastal plains which are mostly associated with short and broad rivers flowing intensively only in wet season. Similar in Oecusse SAR where there is coastal plain and savanna rising to relatively arid hills up to 1000 m a.s.l. followed by higher mountains like the Bisae Sunan (1560 m a.s.l.) as the highest peak of Oecusse SAR. The Tono River (Fig. 1) is the main river of this exclave. About 30 % of Oecusse SAR is covered by woods, mostly by dry forest and *Eucalyptus* woodland, which often is threatened by slash and burn (swidden) agriculture as well as illegal tree cutting. The south coast of Timor has a more extensive coastal plain characterized by small tidal rivers and seasonally flooded swamp forest and grasslands.



Fig. 1. Tono River from the Noefefan bridge, 28-xii-2018, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.

The largest wetland in Timor-Leste is the Lake Iralalero at the Fuloro plateau in the eastern Lautem Municipality. This catchment includes 3-5 km² lake which is periodically floods up to 50 km², swamps and rivers as well as grasslands (Figs 2-5). Several further freshwater lakes, swamps and rivers were found e.g. in Manufahi Municipality, namely the most important Lakes Modo Mahut (Fig. 6), Welenas and Welada (Fig. 7). Most extensive area with primary and secondary tropical forest, covering around 1000 km², occurs in the easternmost Lautem Municipality between Lake Iralalero and the coastline.



Fig. 2. Lake Iralalero environment, 2-viii-2008, Lautem Municipality, Timor-Leste. Photo: Colin Richard Trainor.



Fig. 3. Lake Iralalero environment, 7-iii-2004, Malahara, Lautem Municipality, Timor-Leste. Photo: Colin Richard Trainor.

Fig. 4. Lake Iralalaro environment, 25-iv-2004, Malahara, Lautem Municipality, Timor-Leste. Photo: Colin Richard Trainor.



Fig. 5. Lake Iralalaro environment, 9-x-2004, Lautem Municipality, Timor-Leste. Photo: Colin Richard Trainor.



The Indonesian Rote Island has an area of about 1226 km² and is situated 12 km southwest from Timor. The landscape is flat, dominating by limestone, with Mount Musaklain at 444 m a.s.l. the highest point. The rainy season is comparatively short, from December to March. Thus the island is also very dry with few permanent lakes and streams. The island is quite heavily populated and most of the primary lowland forest has been converted to agriculture (Verbelen et al. 2017).

The volcanic Romang Island has an area of about 184 km²

and it lies about 78 km northeast of Timor and 55 km east of Wetar. The southern part of Romang is hilly with about 200-350 m a.s.l. while there are hills up to 500 m a.s.l. in the northern peninsular. The annual precipitation rate is more than 2000 mm



Fig. 6. Lake Modo Mahut, 13-vi-2005, south of Fatucahi, Manufahi Municipality, Timor-Leste. Photo: Colin Richard Trainor.



Fig. 7. Lake Welada, north of Fatucahi, Manufahi Municipality, Timor-Leste. Photo: Colin Richard Trainor.

and around 80 % of Romang is covered by tropical evergreen forest. However especially the southern peninsular has larger areas which had been converted to agriculture (Trainor & Verbelen 2013).

Sampling locations

Description of some habitats in Oecusse SAR

Often the habitats remain undescribed and unpublished although they could give a better understanding of Odonata species biology and the landscapes where to

search for them. Thus we refer to at least a few habitats from Oecusse SAR, partly including some descriptions on how to access those locations.

Aosnak River (-9.1835° N, 124.4059° E; ca. 20 m a.s.l.)

The Aosnak River is one of the few freshwater rivers in Pante Macassar Sub-Region that flows throughout the year. It is located eastward of Pante Macassar on the road towards the Sakato border (eastern border with Indonesia) about 2 km east of the Kitahara Bay where the Mahata Harbor is situated. This site is easily accessed

Fig. 8. Aosnak river estuary during dry season, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 9. Pools of the drying Aosnak river, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



by car, motorbike or bicycle. The first settlement found after Mahata is called Kuatnana, where a bridge is being constructed over the Haukeh River, which is used to access to Kutete (some 3.5-4 hour hike). The Aosnak river mouth is marked by the Nuaf Pono Hill (60 m a.s.l.) and a dense coastal forest remnant occupying short of one hectare. At the beach front the vegetation resembles that of other coastal areas in Oecusse SAR. Most of the river flows in alluvial ground with occasional ponds being formed over some exposed bedrock. The large water pools (Fig. 8) host e.g. *Diplacodes trivialis* (Rambur, 1842) and *Ischnura senegalensis* (Rambur, 1842), in the smaller pools (Fig. 9) species like *Crocothemis servilia* (Drury, 1773), *Neurothemis ramburii* (Brauer, 1866), *Orthetrum testaceum* (Burmeister, 1839), *Orthetrum sabina* (Drury, 1773) and *Xiphiagrion cyanomelas* Selys, 1876 were found. Also crepuscular species like *Tholymis tillarga* (Fabricius, 1798) and *Gynacantha* sp. cf. *dobsoni* Fraser, 1951 were recorded at this site.

Bolkenat site (-9.2124°N, 124.3835°E; ca. 150 m a.s.l.)

This site is situated in the hills at the southeastern periphery of Pante Macassar. During the wet season this brook tends to be slowly flowing and has some waterfalls. While in the dry season the lack of water results in several pools filled with leaf (Fig. 10). *Nososticta impercepta* was the dominant species here in 2018 but *Rhincocypha pagenstecheri timorana* Lieftinck, 1936 and *Pseudagrion pilidorsum deflexum* Lieftinck, 1936 were found as well.



Fig. 10. Bolkenat during dry season, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.

Kolam Xina (-9.1996° N, 124.3105° E; ca. 6 m a.s.l.)

Kolam Xina is located next to the Lifau Monument. It is composed of a flood plain with water flowing from different rice fields into two larger ponds (Fig. 11; "kolam" = pond). During the different visits to this site the best area thus far to photograph Odonata has been that located in the aforementioned coordinates. This site has the usual coastal vegetation found throughout Oecusse SAR. On the beach side

the vegetation starts with *Spinifex* Linnaeus, 1771 closer to the ocean, followed by *Ipomea pes-caprae* (Linnaeus) R. Brown, 1818 and *Vitex trifolia* Linnaeus, 1753 on the edges of the pond. *Jatropha gossypifolia* Linnaeus, 1753 takes over patches of *Spinifex* grass that have been cleared by means of fire. *Borassus* Linnaeus, 1753 palms are found growing after the *Vitex trifolia* as you move towards the land side. The road that takes you to this pond has majestic Tamarind trees and Chinese Jujube (*Zyziphus mauritiana* Lamarck 1789) trees. The water from the ponds then flows to the ocean by means of an improvised canal which is maintained by the farmers. In 2018 *Crocothemis servilia*, *Diplacodes trivialis*, *Orthetrum sabina*, *Pantala flavescens* (Fabricius, 1798), *Tholymis fillarga*, *Agriocnemis pygmaea* (Rambur, 1842) and the ubiquitous *Ischnura senegalensis* were recorded.

Fig. 11. Brackish water pond at Kolam Xina during dry season, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 12. Spring at Kutete, 4-viii-2018, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Kutete environment (-9.2402°N, 124.4275°E; ca. 718 m a.s.l.)

Kutete village is accessible by hiking from the Haukeh River (see description of the Aosnak River site) or by roads from Pante Macassar. The road to Kutete is part of the Rural Road network system in Oecusse which has had some minor improvement works done over the years. Along the road between Kutete and the neighbouring Buneu is a drainage system (U ditches) with some flowing water or puddles at several sites and small box culverts. *Orthetrum testaceum* and *Trithemis festiva* (Rambur, 1842) were recorded there. Close to the main road, around 15 minute uphill walk in a 120-200 m trail, is a fairly disturbed freshwater point with a spring and water tank (Fig. 12). The main vegetation tended to be made of planted coconuts with interesting assemblage of edible fruit trees. At this site *Rhincocypha pagenstecheri timorana* and *Pseudagrion pilidorsum deflexum* were recorded.



Fig. 13 and 14. Canyon and puddles of the Lokpin spring during dry season, Oecusse SAR, Timor-Leste. Photos: Rui Miguel da Silva Pinto.

Lokpin spring (-9.1825° N, 124.4511° E; ca. 110 m a.s.l.)

This spring is found in Suco Nipane and at first sight it did not look like much. The water flows through a small canyon in wet season while in dry season small pools are developed (Figs 13-14). However *Nososticta impercepta*, *Pseudagrion pilidorsum deflexum* and *Orthetrum testaceum* were recorded.

Oerupan spring (-9.1882° N, 124.4635° E; ca. 80 m a.s.l.)

Located in Suco Nipane, Sakato, Sub-District Pante Macassar. Oerupan spring is a small spring some 30 minutes of walk from the main road to the eastern border with Indonesia. The walk starts from the main road (Fig. 15) and after some ten minutes

Fig. 15. Walk from the street to Oerupan spring, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 16. Oerupan spring during dry season, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.

of walk you reach gardens where *Sesbania grandiflora* (L.) Poiret has been planted for fodder. These trees are often cut every couple of years and new trees are then replanted. The overall vegetation resembles that found in other springs elsewhere in Oecusse SAR. Main “crop” trees found here are betel nut (*Areca catechu* Linnaeus, 1753), edible fruit bearing trees included *Schleichera oleosa* (Lour.) Oken, 1841 and interestingly *Salacca zalacca* (Gaertner) Voss. The dominant leaf matter found in the water pools appeared to be from *Schleichera oleosa* alongside some flowers from *Barringtonia racemosa* (L.) Sprengel, 1826. Unlike other sites, like Lokpin and Bolkenat, this one had only little to no large basalt outcrops along the waterway. A water distribution system has been built here by Warsilla



(part of the Corporate Social Responsibility) and it is composed by a sand filter up stream (65 m a.s.l.) and a water tank (15 m a.s.l.). The water is fairly contained in small shallow puddles with a lot of leaf matter on hard rocks (Fig. 16). During the dry season *Nososticta impercepta* was found to be the dominant species, followed by *Rhinocypha pagenstecheri timorana*, a few *Pseudagrion pilidorsum deflexum* and *Orthetrum testaceum*.

Pools on the road to Aosero (-9.2198° N, 124.2939° E; ca. 12 m a.s.l.)

Along the road to Tulaika, some 2.8 km from the Tono Bridge west abutment soon after Holokhau paddy rice fields is a site located close to paddy rice fields. It is made of different small pools (Fig. 17) where cattle and water buffaloes tend to use to bath and drink during the dry season. The water from this system drains from the paddy rice fields towards Noe Nitu Creek. During the rainy season the water flows freely and is channeled by means of clay canals build by the farmers. This site has clayish soils and limited shade. The predominant trees are some living fences of *Lannea coromandelica* (Houttuyn) Merrill, 1938 and *Borassus* palms. *Jatropha gossypifolia* is the main invasive species found here in scattered patches. In August 2018 *Orthetrum sabina*, *Crocothemis servilia*, *Diplacodes trivialis* and rather rare



Fig. 17. Pool at the road to Aosero during dry season, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.

Orthetrum testaceum were recorded. Most of the Damselflies, like *Ischnura senegalensis*, tended to occur around the water edge and often perch on pond scum respectively filamentous algae patches.

Ulas site (-9.2702° N, 124.3120° E; ca. 270 m a.s.l.)

The Ulas spring is located in Suco Taiboco and is comprised of a remnant forest patch of about 2.5 hectares. The spring is located southeast of the dirt road and this site is marked by a majestic *Barringtonia* Forster & Forster, 1775 tree. The water from the spring is retained by means of a rock embankment (Fig. 18) after which it

Fig. 18. Ulas site during dry season, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



flows freely northwest down slope where community members have planted *Areca* Linnaeus, 1753 palms. Given the steep slope water flows relatively fast until it reaches paddy rice fields some 150 m northwest of the spring and some 250 m above sea level. End of August 2018 the following species were found at Ulas spring and in a recently harvested rice field: *Pseudagrion pilidorsum deflexum*, *Crocothemis servilia*, *Diplacodes trivialis*, *Orthetrum sabina*, *Pantala flavescens* and *Trithemis festiva*.

Annotated species list

Zygoptera

CHLOROCYPHIDAE

1. *Rhinocypha pagenstecheri timorana* Lieftinck, 1936

INDONESIA, EAST NUSA TENGGARA, TIMOR ISLAND: Two specimens collected in Mount Mutis area/South Central Timor Regency and held at the MWNH.

TIMOR-LESTE: Photographed around Pante Macassar/Oecusse SAR, northeast of Oesilo/Oecusse SAR near the Indonesian border, at Tuda Tiris Waterfall south of Dili/Dili Municipality, at Berloi Waterfall/Aileu Municipality, around Com/Lautem Municipality and around Raca/Lautem Municipality. Additionally five specimens were collected in 1973 at Fatumaca/Baucau Municipality held at the MAGNT.

Rhinocypha pagenstecheri timorana appears widespread and very common on Timor Island (altitudes 80-1390 m a.s.l.; map 1). In females the dark wing apices are always lacking whereas in males they are either be present or lacking (Figs 19-21). Perhaps these variations depend on different ages.



Fig. 19. *Rhincocypha pagenstecheri timorana* male with dark wing apices, 29-ix-2018, Oelulan, Oecusse SAR, Timor-Leste.



Fig. 20. *Rhincocypha pagenstecheri timorana* male with hyaline wing apices, 7-ix-2018, Oerupan, Oecusse SAR, Timor-Leste.



Fig. 21. *Rhincocypha pagenstecheri timorana* female, 4-viii-2018, Kute-te, Oecusse SAR, Timor-Leste.
Photos: Rui Miguel da Silva Pinto

COENAGRIONIDAE

2. *Agriocnemis femina* (Brauer, 1868)

TIMOR-LESTE: Recorded in Dili/Dili Municipality, around Raca/Lautem Municipality and Muapusu, south of Com/Lautem Municipality. Additionally four specimens were collected in 1973 at Baucau/Baucau Municipality and held at the MAGNT.

There are scattered records from West Timor to the eastern part of Timor-Leste (altitudes 2-860 m a.s.l.; map 3) of this tiny species. It is likely to be overlooked, especially in the lowlands.

3. *Agriocnemis pygmaea* (Rambur, 1842)

TIMOR-LESTE: Recorded in May and December around Pante Macassar/Oecusse SAR.

Agriocnemis pygmaea was reported from eastern Timor Island by Seehausen (2017b) from two localities but now reported from the western part for the first time (altitudes 4-605 m a.s.l.; map 4). However as in *Agriocnemis femina* it is likely to be overlooked due to its small size.

4. *Ischnura aurora* (Brauer, 1865)

TIMOR-LESTE: Photographed in November near the northern coast of Com/Lautem Municipality (Fig. 22).

These are the first records of this species from Timor Island (altitude 2 m a.s.l.; map 6). Currently there are not enough data to classify the frequency and occurrence on Timor Island.



Fig. 22. *Ischnura aurora* male, 4-xi-2018, around Com, Lautem Municipality, Timor-Leste. Photo: Jafet Potenzo Lopes.

5. *Ischnura senegalensis* (Rambur, 1842)

INDONESIA, EAST NUSA TENGGARA, ROTE ISLAND: Photographed in July around Danau Tua/Rote Ndao Regency.

INDONESIA, EAST NUSA TENGGARA, TIMOR ISLAND: Photographed east of Kupang City/Kupang Regency in August.

TIMOR-LESTE: Several records around Pante Macassar/Oecusse SAR, Dili/Dili Municipality, Parlamento/Lautem Municipality and Com/Lautem Municipality.

This species appears widespread and common on Timor Island (altitudes 0-605 m a.s.l.; map 8) as it is in most of its African and Asian range. Lieftinck (1953) already noted a large series from Timor but without specified localities, thus there are no historical records shown in the distribution map.

6. *Pseudagrion microcephalum* (Rambur, 1842)

TIMOR-LESTE: Photographed around Pante Macassar/Oecusse SAR, at Tasitolu Lake/Dili Municipality, Parlamento/Lautem Municipality and Com/Lautem Municipality.

Pseudagrion microcephalum is widespread and common in most of its range but to date Timorese records are only available from a few localities (altitudes 0-330 m a.s.l.; map 9). However it is likely to be present in appropriate habitats all over the island. Although we could not always check the male appendages via photographs, we assigned all documented specimens to *Pseudagrion microcephalum* here for pragmatic reasons.

7. *Pseudagrion pilidorsum deflexum* Lieftinck, 1936

TIMOR-LESTE: Recorded around Pante Macassar/Oecusse SAR, northeast of Oesilo/Oecusse SAR near the Indonesian border, Com/Lautem Municipality and Raca/Lautem Municipality. Additionally four males were collected in 1973 at Fatumaca/Baucau Municipality and held at the MAGNT.

This species appears widespread and common on Timor Island (altitudes 80-1030 m a.s.l.; map 10) but mostly just a few specimens per locality were documented. The male appendages distinctly differ from the other subspecies (Figs 23-24).

8. *Xiphiagrion cyanomelas* Selys, 1876

TIMOR-LESTE: One male in July at a water pool in the drying Aosnak River eastward Pante Macassar/Oecusse SAR (Fig. 25). Further several specimens were photographed at Muapusu, south of Com/Lautem Municipality in November.

The first record of this species was a male collected by members of the expedition of the Australian Museum Sydney (Seehausen 2017b). These new records show that *Xiphiagrion cyanomelas* is present at different localities across the island (altitudes 22-230 m a.s.l.; map 12) and perhaps it will be found in many appropriate habitats. However to date there are not enough data to classify the frequency.

PLATYCEMIDIDAE

9. *Nososticta impercepta* Seehausen & Theischinger, 2017

TIMOR-LESTE: Found at three spring sites southeast and east of Pante Macassar/Oecusse SAR as well as at four localities around Com/Lautem Municipality and Raca/Lautem Municipality.

These are the first records and pictures of this species alive. It becomes apparent that the pale colour of adult males is a deep orange whereas it is pale greyish-ochre

Fig. 23. *Pseudagrion pilidorsum deflexum* male, 7-ix-2018, Oerupan, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 24. *Pseudagrion pilidorsum deflexum* male appendages, 17-viii-2018, Lokpin spring, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 25. *Xiphagrion cyanomelas* male at a small pool of the drying Aonak river, 21-vii-2018, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



in teneral specimens and could tend to light yellow in females (Figs 26-30). Seehausen & Theischinger (2017) were unsure about the true colour of *Nososticta impercepta* because they only saw preserved specimens. The colour found in the holotype was yellow-orange – thus it truly represents the colour of adult males alive (cf. fig. 2 of Seehausen & Theischinger 2017).

This species appears widespread on Timor Island and common in appropriate habitats (altitudes 80-860 m a.s.l.; map 13). *Nososticta impercepta* seems to require pools and waterholes with very low to almost inexistent water flow as well as shaded places with very good leaf and organic matter (Figs 10, 13-14, 16). The spring habitats in hilly landscape with canyons and large crevices as described below



Fig. 26. *Nososticta impercepta* male, 17-viii-2018, Lokpin spring, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 27. *Nososticta impercepta* male, head and prothorax in lateral (a), dorsal (b) and ventral (c) view, 8-viii-2018, Bolkenat, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.

Fig. 28. *Nososticta impercepta* teneral male, 8-viii-2018, Bolkenat, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 29. *Nososticta impercepta* female, 7-ix-2018, Oerupan, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



(Bolkenat, Lokpin, Oerupan) provide flowing water and small waterfalls in rainy season but only pools and puddles with no visible flow in the dry season. Since all recent records of *Nososticta impercepta* were made in habitats like this, we consider this species to be specialized and dependent on small streams and spring habitats which seasonally dry out to pools. Exuviae were found by RMSP in Oecusse SAR at Bolkenat site as well as at Lokpin spring. Mostly they were found attached to the rocky wall of corresponding pool or puddle. Often they were submerged to about a quarter.



Fig. 30. *Nososticta impercepta* female head and prothorax in dorsal view, 30-vi-2018, Bolkenat, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.

The imagines tended to be found mainly perching in shaded places with dead and dried up leaf patches where especially the teneral stages are well camouflaged. The bright orange adults appear to be more active fliers than the teneral (or at least are easier to spot in flight). They fly relatively close to the ground like most damselflies and were often found perching in fallen branches near the pond. However they tend to be fairly skittish and do not perch for long.

Anisoptera

AESHNIDAE

10. *Anax guttatus* (Burmeister, 1839)

TIMOR-LESTE: Single males were photographed in April in Pante Macassar/Oecusse SAR as well as in June around Com/Lautem Municipality. A further male held at MAGNT was collected in 1973 at Maubisse/Ainaro Municipality.

Just a few records exist from Timor Island (altitudes 8-1392 m a.s.l.; map 15), thus we cannot give much annotation about the status. Perhaps this species is more abundant in regions with larger permanent waterbodies like the Lake Iralalaro in the east of Timor Island and along the high rainfall south coast.

11. *Gynacantha* sp. cf. *dobsoni* Fraser, 1951

TIMOR-LESTE: A single male was collected in September at Aosnak River west of Pante Macassar/Oecusse SAR.

This is the first record of a *Gynacantha* Rambur, 1842 from Timor Island (altitude 14 m a.s.l.; map 16), for information about the characters see the discussion and Figs 43a-c. The measurements (all taken from picture with scale) of the male are: total length 74 mm, S3 "waist" 2 mm, abdomen (without appendages) 48 mm, cerci 8 mm, hindwing 47.5 mm, Pt of forewing 4.2 mm.

Several crepuscular Aeshnidae were found at Aosnak River but only this male could be collected for identification. It shows up around late dusk and seemed to be gone around 7 pm (19-ix-2018). Several further twilight trips to this locality remained without success in collecting more specimens. Currently there are not enough data to classify the frequency and occurrence on Timor Island.

LIBELLULIDAE

12. *Brachythemis contaminata* (Fabricius, 1793)

INDONESIA, EAST NUSA TENGGARA, ROTE ISLAND: Photographed in July around Danau Tua and in December at Danau Munubalu/all Rote Ndao Regency.

INDONESIA, EAST NUSA TENGGARA, TIMOR ISLAND: Photographed around Tilong Dam/ Kupang Regency and east of Kupang City/Kupang Regency.

TIMOR-LESTE: Recorded west and southwest of Pante Macassar/Oecusse SAR (Fig. 31) as well as south of Com/Lautem Municipality.

These are the first documented records from Timor and Rote Island (altitudes 6-97 m a.s.l.; map 17). Lieftinck (1953) reported this species from the Lesser Sunda Islands for the first time and considered it to be somewhat rare and local. Hitherto *Brachythemis contaminata* appears to be scattered across Timor Island.



Fig. 31. *Brachythemis contaminata* male, 8-ix-2018, SW Pante Macassar, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.

13. *Crocothemis servilia* (Drury, 1773)

INDONESIA, EAST NUSA TENGGARA, ROTE ISLAND: Recorded at Kuli village environment and NW of Oelunggu/both Rote Ndao Regency.

INDONESIA, EAST NUSA TENGGARA, TIMOR ISLAND: A few records east of Kupang City/Kupang Regency.

TIMOR-LESTE: Several records around Pante Macassar/Oecusse SAR, Dili/Dili Municipality, Gleno/Ermera Municipality as well as around Com/Lautem Municipality.

These are the first records of *Crocothemis servilia* from Rote Island and this species was reported from Timor Island by Seehausen (2017b) for the first time. However *Crocothemis servilia* appears to be distributed over all of Timor Island (altitudes 0-750 m a.s.l.; map 19) although perhaps more scattered and in lower quantity than it is in other SE Asian regions.

14. *Diplacodes trivialis* (Rambur, 1842)

INDONESIA, EAST NUSA TENGGARA, ROTE ISLAND: Recorded in Nemberala area, around Danau Tua, Danau Manubulu and north of Mboe Eain/all Rote Ndao Regency.

INDONESIA, EAST NUSA TENGGARA, TIMOR ISLAND: Several records east of Kupang City/Kupang Regency.

TIMOR-LESTE: Many records around Pante Macassar/Oecusse SAR, at Tasitolu Lake/Dili Municipality, at Venilale/Baucau Municipality, around Com/Lautem Municipality and Lospalos/Lautem Municipality. Further specimens collected in 1973 at Baucau/Baucau Municipality and held at the MAGNT.

Diplacodes trivialis appears to be very abundant and widespread at Timor and Rote Island as it is in most of its range (altitudes 0-1180 m a.s.l.; map 21).

15. *Macrodiplax cora* (Brauer, 1867)

INDONESIA, EAST NUSA TENGGARA, ROTE ISLAND: Photographed at Lake Danau Tua in July and August (Fig. 32) as well in December at Danau Oendui/both Rote Ndao Regency

These are the first records from Rote Island (altitudes 7-74 m a.s.l.; map 22). Lieffinck (1953) reported *Macrodiplax cora* from Kupang in West Timor/Indonesia and stated



Fig. 32. *Macrodiplax cora* female, 8-viii-2018, Danau Tua, Rote Island, Indonesia. Photo: Colin Richard Trainor.

it to be a predominantly coastal species with strong tendencies for migration. Further searches for this species may be undertaken along coastal regions and mangrove forest. Lieftinck (1934) stated that *Macrodiplax cora* prefers breezy localities like brackish marshes, lagoons as well as estuaries and both sexes and were found flying along the grassy waterside, mangrove vegetation and dry bushes near the coastline. However the records from Rote Island are not from coastal littoral zone but from Lakes around 3-5 km towards the inland.

16. *Neurothemis ramburii* (Brauer, 1866)

TIMOR-LESTE: Recorded at pools of the drying-out Aosnak River east of Pante Macassar/Oecusse SAR, at Gleno/Ermera Municipality, around Com/Lautem Municipality and Raca/Lautem Municipality. Additionally five males collected 1973 at Baucau and Fatumaca/Baucau Municipality and held at the MAGNT.

Appears scattered and not abundant on Timor (altitudes 17-732 m a.s.l.; map 23) but most likely it is present in suitable habitats across the whole Island. All males and isochrome females resemble those of Seehausen (2017b). In September the first heterochrome female was documented from Timor (around Raca/Lautem Municipality).

17. *Orthemtrum caledonicum* (Brauer, 1865)

TIMOR-LESTE: Recent records were made in November around Com/Lautem Municipality (Fig. 33). Additionally two males were collected in 1973 at Fatumaca/ Baucau Municipality and held at the MAGNT.

To date this species appears rare and scattered at Timor Island (altitudes 73-1200 m a.s.l.; map 24), although probably locally common.



Fig. 33. *Orthemtrum caledonicum* male, 2-xi-2018, Ira-Ara, Com, Lautem Municipality, Timor-Leste. Photo: Jafet Potenzo Lopes.

18. *Orthemtrum glaucum* (Brauer, 1865)

TIMOR-LESTE: Recorded in September northeast of Oesilo/Oecusse SAR (Fig. 34) and in December at Berloi Waterfall/Aileu Municipality.

This species appears rare and scattered at Timor Island (altitudes 367-1020 m a.s.l.; map 25).



Fig. 34. *Orthetrum glaucum* male, 29-ix-2018, Oelulan, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 35. *Orthetrum pruinosum schneideri* male, 27-x-2018, Tuda Tiris Waterfall, Dili Municipality, Timor-Leste. Photo: Jafet Potenzo Lopes.

19. *Orthetrum pruinosum schneideri* Förster, 1903

TIMOR-LESTE: A male was photographed in October at Tuda Tiris Waterfall south of Dili/Dili Municipality (Fig. 35) and in December at Berloi Waterfall/Aileu Municipality.

Orthetrum pruinosum schneideri appears rare and scattered on Timor (altitudes 242-859 m a.s.l.; map 26) maybe with a preference for waterfalls. As stated by Seehausen (2017b) it appears fairly odd that specimens with characters of ssp. *schneideri* occur on Timor Island instead of the nominate subspecies.

20. *Orthetrum sabina* (Drury, 1773)

INDONESIA, EAST NUSA TENGGARA, ROTE ISLAND: Photographed around Danau Tua, east of Oelunggu as well as at Danu Oendui/all Rote Ndao Regency.

INDONESIA, EAST NUSA TENGGARA, TIMOR ISLAND: A few records east of Kupang City/Kupang Regency.

TIMOR-LESTE: Found around Pante Macassar/Oecusse SAR, Dili/Dili Municipality, Loi-Huno/Ossu Municipality, Selo-Kraik/Aileu Municipality, around Ou Swamp, south-west of Lospalos/Lautem Municipality, Parlamento/Lautem Municipality and around Com/Lautem Municipality. Further specimens collected in 1973 at Baucau/Baucau Municipality and held at MAGNT.

Orthetrum sabina appears common on Timor Island in appropriate habitats (altitudes 2-1088 m a.s.l.; map 27).

21. *Orthetrum testaceum* (Burmeister, 1839)

INDONESIA, MALUKU, ROMANG ISLAND: A male was photographed around Lakuwahi/Maluku Barat Daya Regency.

TIMOR-LESTE: Several males photographed around Pante Macassar/Oecusse SAR, northeast of Oesilo/Oecusse SAR near the Indonesian border, at Berloi Waterfall/Aileu Municipality, at Tuda Tiris Waterfall south of Dili/Dili Municipality, Gleno/Ermera Municipality, around Parlamento/Lautem Municipality, Com/Lautem Municipality and Raca/Lautem Municipality. Additionally a male collected in 1973 at Baucau/Baucau Municipality and held at MAGNT.

Orthetrum testaceum is reported from Romang Island for the first time yet, but it appears common at Timor Island and it is likely to be found in appropriate habitats across the whole island (altitudes 15-1000 m a.s.l.; map 28). The abundance is difficult to interpret but Liefstinck (1934) stated it to be a lowland species which becomes rare at higher altitudes. Concerning the male from Romang Island and its taxonomical classification see discussion and Figs 40-41.

22. *Pantala flavescens* (Fabricius, 1798)

INDONESIA, EAST NUSA TENGGARA, TIMOR ISLAND: Around 20 specimens were recorded in August at rice paddy east of Kupang City/Kupang Regency.

TIMOR-LESTE: Caught and photographed in July and August west and southwest of Pante Macassar/Oecusse SAR and emerged in December at Tasitolu Lake/ Dili Municipality. Further a female collected in 1973 at Fatumaca/Baucau Municipality and held at the MAGNT.

This strongly migrating dragonfly was found fairly scattered throughout Timor Island (altitudes 1-605 m a.s.l.; map 29) but appears to be found predominantly in beach areas.

23. *Potomarcha congener* (Rambur, 1842)

INDONESIA, EAST NUSA TENGGARA, ROTE ISLAND: A female photographed in August north of Ombok/Rote Ndao Regency.

TIMOR-LESTE: Photographed in September around Raca/Lautem Municipality and in November around Com/Lautem Municipality (Fig. 36). Additional five specimens collected in 1973 at Dili/Dili Municipality and held at the MAGNT.

This species was reported from Timor for the first time by Seehausen (2017b) and is now documented from Rote Island for the first time. To date it is found to be rare and scattered on Timor Island (altitudes 7-388 m a.s.l.; map 30). Liefstinck (1934) stated that this species could be found at muddy pools and turbid drinking



Fig. 36. *Potamarcha congener* female, 3-xi-2018, Kamin Kuru, Com, Lautem Municipality, Timor-Leste. Photo: Jafet Potenzo Lopes.



Fig. 37. *Rhythemis phyllis* female, 24-vii-2018, Danau Tua, Rote Island, Indonesia. Photo: Colin Richard Trainor.

places of buffalos but also far from water and often found settling on telephone wires – thus it might be overlooked across Timor.

24. *Rhythemis phyllis* (Sulzer, 1776)

INDONESIA, EAST NUSA TENGGARA, ROTE ISLAND: A female photographed around Danau Tua/Rote Ndao Regency in July (Fig. 37).

This is the first documented record of *Rhythemis phyllis* from Rote Island (altitude 74 m a.s.l.; map 32) and expands the subspecies range (see also discussion). It might be present at Timor Island as well but there are no records yet.

25. *Tholymis tillarga* (Fabricius, 1798)

TIMOR-LESTE: Photographed at Aosnak River east of Pante Macassar/Oecusse SAR (Fig. 38) where this species appears regular as well as at Kolam Xina west of Pante Macassar/Oecusse SAR and at Dili/Dili Municipality.

Fig. 38. *Tholymis tillarga* male, 18-ix-2018, Aosnak River, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 39. *Tamea stenoloba* male, 5-viii-2018, SW Pante Macassar, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



These are the first records from Timor Island (altitudes 4-27 m a.s.l.; map 34) of this widespread in SE Asia species. However it was not unexpected and the first targeted crepuscular trip to the Aosnak River/Oecusse SAR produced a record and *Tholymis tillarga* appears to be most active there from 5:30-6 pm but stays at the site up to 7 pm. The species is considered to be present in appropriate habitats across the whole island.

26. *Tamea stenoloba* (Watson, 1962)

INDONESIA, EAST NUSA TENGGARA, TIMOR ISLAND: Two males in the collection of the MWNH from Mount Mutis area/South Central Timor Regency and also photographed in December in the east of Kupang City/Kupang Regency.

TIMOR-LESTE: Photographed in July and August east and west of Pante Macassar/Oecusse SAR (Fig. 39) and in December at Tasitolu Lake/Dili Municipality.

Tramea stenoloba was found to be rare and scattered across Timor Island (altitudes 0-1290 m a.s.l.; map 36) and to date it appears uncertain if these individuals may be just vagrants from Australia because of the low abundance. The records from Mount Mutis area are from high altitude but predominantly it was found in lowlands near the coast. A specimen listed as in the collection at the MAGNT and collected 1973 at Fatumaca/Baucau Municipality was not found by CRT, thus it is not included here.

27. *Trithemis festiva* (Rambur, 1842)

TIMOR-LESTE: Males photographed southeast as well as southwest of Pante Macassar/Oecusse SAR, northeast of Oesilo/Oecusse SAR near the Indonesian border, at Berloi Waterfall/Aileu Municipality as well as around Com/Lautem Municipality. Further two males collected in 1973 at Fatumaca/Baucau Municipality and held at the MAGNT.

To date this riverine species is reported from scattered localities across the whole Island (altitudes 124-1030 m a.s.l.; map 38). However it appears to be uncommon, perhaps due to the lack of many permanent flowing rivers and streams at Timor.

28. *Trithemis lilacina* Förster, 1899

TIMOR-LESTE: Recorded in October at Tuda Tiris Waterfall south of Dili/Dili Municipality (Fig. 40) and in December at Berloi Waterfall/Aileu Municipality.

To date this Lesser Sunda endemic is reported from four localities across Timor Island (altitudes of 130-900 m a.s.l.; map 39). *Trithemis lilacina* appears to be rare and scattered, perhaps due to the lack of many permanent flowing rivers and streams at Timor.



Fig. 40. *Trithemis lilacina* male, 4-x-2018, Tuda Tiris Waterfall, Dili Municipality, Timor-Leste. Photo: Jafet Potenzo Lopes.

Discussion

These recent records substantially improve knowledge of Odonata status from an area which was hitherto "terra incognita" including descriptions of some habitats as well as first living photographs of the supposed Timorese endemic *Nososticta impercepta*. The records of *Ischnura aurora*, *Gynacantha* sp. cf. *dobsoni*, *Brachythemis contaminata* and *Tholymis fillarga* increase the checklist of Timorese Odonata to 40 species. *Brachythemis contaminata* is also reported from Rote Island for the first time as well as *Crocothemis servilia*, *Macrodiplax cora*, *Potamarcha congener* and *Rhyothemis phyllis*. The record of *Orthetrum testaceum* from Romang is apparently

Fig. 41. *Orthetrum testaceum* male, 21-vii-2018, Aosnak River, Oecusse SAR, Timor-Leste. Photo: Rui Miguel da Silva Pinto.



Fig. 42. *Orthetrum testaceum* (cf. *soembanum*?) male, 25-x-2010, Lakuwahi, Romang Island, Indonesia. Photo: Colin Richard Trainor.



the first Odonata record from this island. Lief tinck (1936, 1953) refers to the occurrence of the nominate subspecies on Timor Island whereas *Orthemum testaceum soembanum* Förster, 1903 occurs on from Lombok to the Timorese surrounding islands of Sumba, Sumbawa, Flores, Alor and Wetar. The main difference between the subspecies appears to be the darker base of the hind wing in ssp. *soembanum* (Ris 1909b, Lief tinck 1936). MS studied specimens from Sumbawa and Sumba in the Coll. Selys held at the Institut royal des Sciences naturelles de Belgique (IRSNB) in Bruxelles and also found the amber coloured bases of the hind wings as only character for separation. The male from Romang Island appears to have darker bases of the hind wings than it is in the Timorese specimens (Figs 41-42), thus it might belong to the ssp. *soembanum*. However it is difficult to classify the subspecies from the photograph with certainty. A review of the taxonomical status of ssp. *soembanum* is advised.



Fig. 43. *Gynacantha* sp. cf. *dobsoni* male (a), S2 with secondary genitalia from ventral (b), appendages from dorsal (c), 19-ix-2018, Aosnak river, Oecusse SAR, Timor-Leste. Photos: Rui Miguel Da Silva Pinto.

The first record of a *Gynacantha* Rambur, 1842 from Timor Island reveals difficulties in identification and it was none of the species already known from the Lesser Sunda Islands. The habitus of the Timorese specimen (Figs 43a-c) is that of *Gynacantha dobsoni* or *Gynacantha rosenbergi* Brauer, 1867. However the male appears to have almost no denticle around the margin of the genital fossa whereas the Australian *Gynacantha dobsoni* should have 8-30 denticles there. The similar *Gynacantha rosenbergi* often has less denticles than *Gynacantha dobsoni* but differs at least slightly in the shape of the male anal appendages (Theischinger & Hawking 2006). Thus we here list it as *Gynacantha* sp. cf. *dobsoni*, but this Timorese *Gynacantha* might possibly be an undescribed species very near to *Gynacantha dobsoni* as it was found for example with *Indolestes lafaeci* Seehausen, 2017 and *Indolestes insularis* (Tillyard, 1913; cf. Seehausen 2017a). Thus further studies are recommended to clarify the taxonomic status and the relationship of the Timorese specimens (Theischinger pers. comm.).

There are several subspecies described in the *Rhyothemis phyllis* taxa group of species and the status of almost all is considered to be doubtful. A comprehensive study of all these taxa is under progress by MS but at this point we refer to *Rhyothemis phyllis ixias* Lieftinck, 1953 which was described from Sumba and Flores Island and the adjacency of Rote Island made it necessary to keep it in mind. Based on studies by MS (including type material) the main difference of ssp. *ixias* compared to the nominate subspecies is the darker face and blackish labium whereas it is almost yellow in the nominate subspecies. The hind wing patch of females of the ssp. *ixias* reaches to around Ax2, the distal end of the triangle and the distal end of the anal loop, the yellow band is of about one third of the hindwing patch. But these characters of the hindwing patch are the same in the nominate subspecies and do not allow a separation. The photograph from Rote Island (Fig. 37) shows the upper surface and not the front or the labium, thus we cannot refer to the colour of them. Nevertheless the colouration of the face and labium as the only difference is considered doubtful as justification for a subspecific status and it is likely that further studies will result in synonymy.

However it is likely that *Rhyothemis phyllis* also occurs on Timor Island and it would be highly interesting to check if these also were phenotypic SE Asian or perhaps corresponds with *Rhyothemis phyllis obscura* (Brauer, 1868) from Molucca Islands or even *Rhyothemis phyllis chloe* Kirby, 1894 from Australia. This species could be searched for around a variety of standing water habitats, these may be marshes or ponds but also disturbed and artificial habitats like wet rice fields, drains and drainage ditches in plantations (Dow 2017a).

Beside *Rhyothemis phyllis* there are several other species where a specific search on Timor Island is suggested in the future, primarily the species with data deficient which are often only known from historical records:

- *Indolestes lafaeci* Seehausen, 2017: only historical records from the type locality (map 2); habitat unknown (perhaps riverine lagoons, ponds and pools, including temporary ponds).
- *Austroallagma sagittiferum* (Lieftinck, 1949): only historical records from two localities (map 5); inhabits lakes and ponds with abundant growth of water-lilies and other aquatic plants (Lieftinck 1953).



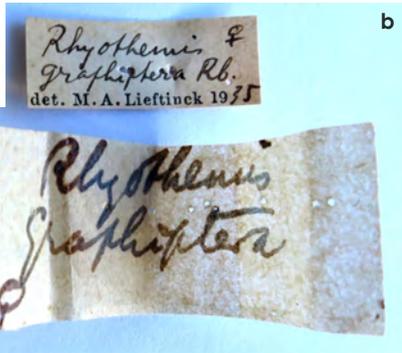
Fig. 44. *Pseudagrion schmidtianum* male paralectotype (a) with labels (b) and appendages from dorso-lateral (c), collected by Ed. Handschin, xii.1931-i.1932, Amarassi, West Timor. Photos: Naturhistorisches Museum Basel.

- *Pseudagrion schmidtianum* Lieftinck, 1936: only historical records from the type locality (Figs 44a-c; map 11); habitat unknown (perhaps similar to *Pseudagrion microcephalum* which inhabits still and flowing waters like streams, rivers, riverine lagoons, lakes and ponds; Theischinger & Hawking 2006).
- *Diplacodes haematodes* (Burmeister, 1839): only a few historical records (map 20); inhabits streams and rivers as well as still waters (Theischinger & Hawking 2006).
- *Macrodiplox cora* (Brauer, 1867): only one historical record: inhabits riverine pools and lagoons, ponds (including temporary ponds) and swamps (Theischinger & Hawking 2006).

a



Fig. 45. *Rhyothemis graphiptera* female (a) with labels (b), collected at Koepang [Kupang], West Timor. Photos: Naturhistorisches Museum Basel.



- *Rhyothemis graphiptera* (Rambur, 1842): only one historical record from Kupang/ West Timor (Figs 45a-b; map 31); inhabits riverine lagoons, lakes, ponds and swamps (Theischinger & Hawking 2006).
- *Tetrathemis irregularis hyalina* Kirby, 1889: only unspecified historical records (map 33); inhabits swamp forest, sluggish forest streams and shady ponds (Dow 2017b).
- *Tramea loewii* (Brauer, 1866): only one unspecified historical record (map 35); inhabits a wide range of still waters, including temporary ponds and swamps (Theischinger & Hawking 2006).
- *Zygonyx ida* Selys, 1869: only one unspecified historical record (map 40); breeds in rocky forest streams, typically in hilly and mountainous terrain (Dow 2011).

Besides these nine species *Epophthalmia vittigera* (Rambur, 1842) was historically reported from Timor but this record is considered to be doubtful (Lieftinck 1936, Seehausen 2017b). This species is difficult to capture and likely to be under-recorded in most of its range. It inhabits a broad range of habitats from ponds and wet rice fields to lakes and reservoirs as well as open sections of slow flowing rivers (Subramanian 2010).

Highly recommended is specific search for crepuscular species like *Zyxomma obtusum* Albarda, 1881 which has been reported from Timor for the first time by Seehausen (2017b). The single female was collected at Same/Manufahi Municipality at an altitude of 490 m a.s.l. in the garden of a house (map 41). According to Lieftinck (1934) this species has a very short period of daily activity from around 5.30-6 a.m. and again from 5-6.30 p.m. and disappears soon after sunrise. Orr (2003) stated that it normally commences activity after sunset in Borneo. *Zyxomma obtusum* occurs in altitudes from the lowlands up to about 850 m a.s.l. and inhabits often forested or shady ponds and lakes as well as even small artificial tanks and reservoirs, gulleys and drainage canals (Lieftinck 1934, Orr 2003). Some crepuscular species are attracted to light and this is the case in *Zyxomma obtusum* as well (Orr 2003). During search in evening time also other crepuscular species should be looked for although they have not been reported from Timor so far. As a proposal these are at least:

- *Anaciaeschna jaspidea* (Burmeister, 1839): inhabits weedy ponds, marshes, shallow lakes, abandoned rice fields and even salty mangrove lagoons and marshy drains (Orr 2003, Dow 2010).
- *Zyxomma petiolatum* Rambur, 1842: inhabits a wide range of standing and slowly flowing waters, including those in open and highly disturbed habitats (Subramanian & Dow 2017).
- *Gynacantha* sp. (e.g. *bayadera* Selys, 1891, *musa* Karsch, 1892, *subinterrupta* Rambur, 1842): mainly inhabits marshy areas and pools in a wide variety of lowland forests, including extremely disturbed areas (Mitra 2010, Do 2011).

Beside species with clearly characters which could almost doubtless be identified via photographs, there are also some species which could easily be mistaken. For example *Orthetrum testaceum* could easily be confused with *Orthetrum chrysis* (Selys, 1891), which is a widespread species in Southeast Asia and reported from Sumbawa and Sumba Island – but not from Timor so far (Lieftinck 1953). *Orthetrum chrysis* is slightly smaller in size than *Orthetrum testaceum* but males can only safely be separated by the tuft of long black hairs at the anterior lamina of the secondary genitalia whereas *Orthetrum testaceum* has but some shorter and pale hairs not sorted as a distinct brush. Further *Orthetrum chrysis* often appears darker with the face reddish, the eyes darker greyish blue-brown, the thorax brown without trace of reddish-orange and usually the yellow basal patch in the hindwing is slightly smaller (only reaching to Ax1).

Likewise the separation between *Crocothemis servilia*, a species well known from Timor Island, and *Rhodothemis nigripes* Lohmann, 1984 respectively *Rhodothemis lieftincki* Fraser, 1954 makes difficulties. Both latter occur in the surroundings of Timor Island: *Rhodothemis nigripes* was described from Sumba Island and is also known from Flores and the Maluku region to West Papua whereas *Rhodothemis lieftincki* occurs in Australia and southern New Guinea (Kalkman & Orr 2014). It is difficult to separate both from

Crocothemis servilia but also from each other without catching them. Compared to *Crocothemis servilia* the eyes of *Rhodothemis* Ris, 1909 species meeting over a very short distance, the spines on the legs are larger, they have longer hind femora (reaching to the base of the abdomen) and the hind lobe of the prothorax is larger and erect. Also the legs of *Rhodothemis* species, especially in *Rhodothemis nigripes*, are more blackish than it is in *Crocothemis servilia*. The female and young male *Rhodothemis* are easy to separate from *Crocothemis servilia* by the pale midline at the dorsum of the thorax (Kalkman & Orr 2014).

Most of the Odonata species occurring on Timor Island are Southeast Asian representatives and partly reaching Australia. Timor Island is at the edge between Southeast Asia and Australia, thus there are Australian respectively eastern distributed species as well. The following eight of the 40 species known to occur on Timor Island are eastern representatives occurring in Australia, New Guinea and the Maluku Islands and reaching their western border at Timor or Sumba Island: *Ischnura heferosticta* (Burmeister, 1839), *Anax georgius* Selys, 1872, *Gynacantha* sp. cf. *dobsoni*, *Diplacodes haematodes*, *Orthetrum caledonicum*, *Rhyothemis graphiptera*, *Tamea loewii* and *Tamea stenoloba*. Three species are apparently endemic to Timor Island (*Indolestes lafaeci*, *Nososticta impercepta*, *Pseudagrion schmidtianum*). Two species (*Austrolagma sagittiferum*, *Trithemis lilacina*) and two subspecies (*Rhinocypha pagenstecheri timorana*, *Pseudagrion pliidorsum deflexum*) are endemic to the Lesser Sunda Islands respectively the eastern part of them or just the surroundings of Timor Island.

However a specific expedition to Timor with focus on Odonata has never been done to date and there are a lot of further species likely to occur on Timor Island, even undescribed ones. Especially the large wetlands in the southern and eastern part of Timor-Leste as well as the mountainous wetlands like in Ermera and Maubisse environments are highly recommended for further research. For example WRM & ERISS (2007) listed several Odonata identified to family level but a few species from southern Lake Iralalaro environment. Of them *Hemicordulia australiae* (Rambur, 1842), (?) *Hemicordulia tau* Selys, 1871, *Crocothemis nigrifrons* (Kirby, 1894), *Hydrobasileus brevistylus* (Brauer, 1865), *Orthetrum villosovittatum* (Brauer, 1868)/*migratum* Lieftinck, 1951, *Urothemis aliena* Selys, 1878 and *Diplacodes* cf. *melanopsis* (Martin, 1901) would be new records for Timor Island. Unfortunately they do not provide information about the determination of these species and if it refers to larvae or adult specimens. Larvae of Odonata from South East Asia are very difficult to almost impossible to identify certainly, because corresponding studies and literature are lacking. Nevertheless the occurrence on Timor Island of some of these species is possible. Thus further research may verify the records of WRM & ERISS (2007). Indonesian West Timor has very few freshwater lakes, but broad braided stream channels and ricefields provide extensive freshwater habitats which could be searched for Odonata.

Acknowledgements

We highly acknowledge the help of Gavin Dally (MAGNT), Wouter Dekoninck and Jerome Constant (both IRSNB) for the possibility to access the Odonata collections in

their care, Stephen Kearney for permission to include his record of *Orthetrum sabina* as well as Günther Theischinger for help with identifying *Gynacantha dobsoni* and useful suggestions about the Timorese specimen. Further we are grateful to Asmus Schröter and Milen Marinov for critical reading and useful comments on the manuscript and like to thank the operators and users of iNaturalist for their database and participation in lively discussions.

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Appendix 1

Chlorocyphidae

1. *Rhinocypha pagenstecheri timorana* Lieftinck, 1936

INDONESIA, EAST NUSA TENGGARA, SOUTH CENTRAL TIMOR REGENCY: 2♂♂, iv-2016, Kolon village environment, Mount Mutis area, ca. -9.5886°N, 124.2081°E, ca. 1290 m a.s.l., MWNH.

TIMOR-LESTE, AILEU MUNICIPALITY: 2♂♂, 5-xii-2018, Be Tuda Berloi Waterfall, -8.6452-53°N, 125.5252°E, ca. 541-545 m a.s.l., Photos: JPL. URL (Downloaded on 10.12.2018): www.inaturalist.org/observations/18916038; www.inaturalist.org/observations/18955967.

TIMOR-LESTE, BAUCAU MUNICIPALITY: 4♂♂ 1♀, 19-x-1973, Fatumaca, 10 km south of Baucau, ca. -8.57°N, 126.39°E, ca. 565 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, DILI MUNICIPALITY: 2♂♂ 2♀♀, 4-x-2018, Tuda Tiris Waterfall, south of Dili, -8.6175°N, 125.5565°E, ca. 496 m a.s.l., Photos: JPL. URL (Downloaded on 8.10.2018): www.inaturalist.org/observations/17209640; www.inaturalist.org/observations/17209757; www.inaturalist.org/observations/17209669; www.inaturalist.org/observations/17209644. 2♂♂ 2♀♀, 27-x-2018, Tuda Tiris Waterfall, south of Dili, -8.6175°N, 125.5565°E, ca. 496 m a.s.l., Photos: JPL. URL (Downloaded on 29.10.2018): www.inaturalist.org/observations/17891419; www.inaturalist.org/observations/17891700; www.inaturalist.org/observations/17891895.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 2♂♂, 24-iii-2017, Ira-Ara, north of Com, -8.3422-23°N, 127.0191-93°E, ca. 95-97 m a.s.l., Photos: JPL. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14595428; www.inaturalist.org/observations/15220567. 1♂ 2♀♀, 1-ix-2018, Pipi-Ira, Raca, -8.4430-43°N, 126.9577-9635°E, ca. 372-390 m a.s.l., Photos: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16099428; www.inaturalist.org/observations/16098378; www.inaturalist.org/observations/16098789. 1♂, 1-ix-2018, Noro-Lata, Raca, -8.4425°N, 126.9698°E, ca. 396 m a.s.l., Photo: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16099037. 1♂ 1♀, 2-ix-2018, Upu-Milan, Mauloho, -8.4456°N, 126.9654°E, ca. 356 m a.s.l., Photo: JPL. URL (Downloaded on 5.9.2018): www.inaturalist.org/observations/16197834. 1♂ 2♀♀, 3-xi-2018, Kamin Kuru, Com, -8.3646-60°N, 127.0536-42°E, ca. 144-171 m a.s.l., Photo: JPL. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/18053705; www.inaturalist.org/observations/18053827; www.inaturalist.org/observations/18053780. 3♂♂, 8-xi-2018, Muapusu, south of Com, -8.3704-12°N, 127.0695-99°E, ca. 92-109 m a.s.l., Photos: JPL. URL (Downloaded on 13.11.2018): www.inaturalist.org/observations/18361626; www.inaturalist.org/observations/18361513; www.inaturalist.org/observations/18361463.

TIMOR-LESTE, OECUSSE SAR: 1♂, 8-iv-2018, Bolkenat, SE Pante Macassar, -9.2144°N, 124.3915°E, ca. 194 m a.s.l., Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/10696769. 1♂, 30-iv-2018, Bolkenat, SE Pante Macassar, -9.2090°N, 124.3815°E, ca. 111 m a.s.l., Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14009784. 2♂♂ 2♀♀, 4-viii-2018, Kutete, SE Pante Macassar,

-9.2400-13°N, 124.4273-75°E, ca. 689-723 m a.s.l., Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15099472; www.inaturalist.org/observations/15095692; www.inaturalist.org/observations/15098704; www.inaturalist.org/observations/15098896. 1♂ 1♀, 7-ix-2018, Oerupan, E Pante Macassar, -9.1882°N, 124.4635-36°E, ca. 81-82 m a.s.l., Photos: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16279293; www.inaturalist.org/observations/16279292. 2♂♂, 29-ix-2018, Oelulan, NE Oesilo, -9.3169°N, 124.4043°E, ca. 535 m a.s.l., Photos: RMSP. URL (Downloaded on 30.9.2018): www.inaturalist.org/observations/17019655; www.inaturalist.org/observations/17019542. 1♂, 28-xi-2018, Bolkenaf, SE Pante Macassar, -9.2124°N, 124.3835°E, ca. 150 m a.s.l., Photo: RMSP. URL (Downloaded on 28.11.2018): www.inaturalist.org/observations/18692665.

Coenagrionidae

2. *Agriocnemis femina* (Brauer, 1868)

TIMOR-LESTE, BAUCAU MUNICIPALITY: 4♂♂, 18-x-1973, Baucau, ca. -8.47°N, 126.45°E, ca. 439 m a.s.l., Tom Weir leg., MAGNT

TIMOR-LESTE, DILI MUNICIPALITY: 8♂♂ 1♀, 22-xi-2018, Avenida de Portugal, Dili, -8.5484-90°N, 125.5646-47°E, ca. 2-3 m a.s.l., Photos: JPL. URL (Downloaded on 23.11.2018): www.inaturalist.org/observations/18570493; www.inaturalist.org/observations/18570315; www.inaturalist.org/observations/18570182; www.inaturalist.org/observations/18570397; www.inaturalist.org/observations/18570570; www.inaturalist.org/observations/18565094; www.inaturalist.org/observations/18565256; www.inaturalist.org/observations/18562468; www.inaturalist.org/observations/18570641.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂, 2-ix-2018, Upu-Milan, Mauloho, -8.4458°N, 126.9646°E, ca. 348 m a.s.l., Photo: JPL. URL (Downloaded on 5.9.2018): www.inaturalist.org/observations/16198075. 4♂♂ 1♀, 8-xi-2018, Muapusu, south of Com, -8.3714-18°N, 127.0702-06°E, ca. 107-115 m a.s.l., Photo: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18470337; www.inaturalist.org/observations/18352428; www.inaturalist.org/observations/18352295; www.inaturalist.org/observations/18352212; www.inaturalist.org/observations/18352623.

3. *Agriocnemis pygmaea* (Rambur, 1842)

TIMOR-LESTE, OECUSSE SAR: 1♂, 10-v-2018, Pante Macassar, -9.2018°N, 124.3460°E, ca. 8 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/12318361. 3♂♂, 1-xii-2018, Kolam Xina, W Pante Macassar, -9.2006-07°N, 124.3170-72°E, ca. 4 m a.s.l. Photos: RMSP. URL (Downloaded on 3.12.2018): www.inaturalist.org/observations/18751982; www.inaturalist.org/observations/18753365; www.inaturalist.org/observations/18751981.

4. *Ischnura aurora* (Brauer, 1865)

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂ 1♀, 4-xi-2018, Kaisala-Hot, Com, -8.3620-23°N, 127.0625-26°E, ca. 2-4 m a.s.l., Photos: JPL. URL (Downloaded on 07.11.2018): www.inaturalist.org/observations/18165696; www.inaturalist.org/observations/18165970. 1♀, 8-xi-2018, Kaisala-Hot, Com, -8.3622°N, 127.0628°E, ca. 3 m a.s.l., Photo: JPL. URL (Downloaded on 11.11.2018): www.inaturalist.org/observations/18315862. 1♀, 9-xi-2018, Ira-Ara Alepala, Com, -8.3370°N, 127.0214°E, ca. 6 m a.s.l., Photo: JPL. URL (Downloaded on 11.11.2018): www.inaturalist.org/observations/18306038.

5. *Ischnura senegalensis* (Rambur, 1842)

INDONESIA, EAST NUSA TENGGARA, ROTE NDAO REGENCY: 3♂♂ 2♀♀, 24-vii-2018, Danau Tua, -10.8538°N, 122.9222°E, ca. 74 m a.s.l. Photos: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14710890; www.inaturalist.org/observations/14710805; www.inaturalist.org/observations/14710872; www.inaturalist.org/observations/14710884.

INDONESIA, EAST NUSA TENGGARA, KUPANG REGENCY: 3♂♂, 10-viii-2018, E Kupang City, -10.1016-18°N, 123.750203°E, ca. 7 m a.s.l. Photos: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15281339; www.inaturalist.org/observations/15281354; www.inaturalist.org/observations/15281511. 1♂, 12-viii-2018, E Kupang City, -10.1218°N, 123.7063°E, ca. 9 m a.s.l. Photo: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15339327.

TIMOR-LESTE, DILI MUNICIPALITY: 2♂♂, 22-xi-2018, Avenida de Portugal, Dili, -8.5485-90°N, 125.5647°E, ca. 2-3 m a.s.l., Photos: JPL. URL (Downloaded on 23.11.2018): www.inaturalist.org/observations/18570002; www.inaturalist.org/observations/18570002.

inaturalist.org/observations/18564522. 5♂♂, 20-xii-2018, Lake Tasitolu, W Dili, -8.5619-45°N, 125.5015-53°E, ca. 0-3 m a.s.l., Photos: JPL. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19127372; www.inaturalist.org/observations/19127320; www.inaturalist.org/observations/19127082; www.inaturalist.org/observations/19126883; www.inaturalist.org/observations/19127350.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂, 2-ix-2018, Seren-ira, Parlamento, -8.3515°N, 126.9864°E, ca. 295 m a.s.l., Photo: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16128494. 2♂♂ 1♀, 4-xi-2018, Kaisala-Hot, Com, -8.3620-21°N, 127.0625-26°E, ca. 2-3 m a.s.l., Photos: JPL. URL (Downloaded on 07.11.2018): www.inaturalist.org/observations/18125308; www.inaturalist.org/observations/18125254; www.inaturalist.org/observations/18165767. 3♂♂ 2♀♀, 8-xi-2018, Kaisala-Hot, Com, -8.3619-25°N, 127.0625-27°E, ca. 2-5 m a.s.l., Photos: JPL. URL (Downloaded on 11.11.2018): www.inaturalist.org/observations/18316513; www.inaturalist.org/observations/18316598; www.inaturalist.org/observations/18315604; www.inaturalist.org/observations/18316388; www.inaturalist.org/observations/18316156. 2♂♂, 8-xi-2018, Muapusu, south of Com, -8.3701-02°N, 127.0671-86°E, ca. 79-93 m a.s.l., Photos: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18352041; www.inaturalist.org/observations/18471419. 5♂♂ 3♀♀, 9-xi-2018, Kaisala-Hot, Com, -8.3618-22°N, 127.0625-26°E, ca. 2-4 m a.s.l., Photos: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18321885; www.inaturalist.org/observations/18321689; www.inaturalist.org/observations/18321714; www.inaturalist.org/observations/18322022; www.inaturalist.org/observations/18321964; www.inaturalist.org/observations/18471365; www.inaturalist.org/observations/18471318. 2♂♂ 2♀♀, 9-xi-2018, Ira-Ara Alepala, Com, -8.3352-71°N, 127.0182-0202°E, ca. 8-13 m a.s.l., Photo: JPL. URL (Downloaded on 11.11.2018): www.inaturalist.org/observations/18313947; www.inaturalist.org/observations/18306310; www.inaturalist.org/observations/18305900; www.inaturalist.org/observations/18305692.

TIMOR-LESTE, OECUSSE SAR: 3♂♂, 23-iv-2018, Pante Macassar, -9.2018-20°N, 124.3460-61°E, ca. 8 m a.s.l. Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/13144324; www.inaturalist.org/observations/14036702; www.inaturalist.org/observations/14036663. 2♂♂ 1♀, 31-vii-2018, Lifau environment, W Pante Macassar, -9.2041-43°N, 124.3222°E, ca. 20 m a.s.l. Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15045227; www.inaturalist.org/observations/15041543; www.inaturalist.org/observations/15038137. 1♀, 5-viii-2018, SW Pante Macassar, -9.2179°N, 124.3299°E, ca. 18 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15133345. 1♂ 1♀, 10-viii-2018, Aosnak River, E Pante Macassar, -9.1813-15°N, 124.4046-48°E, ca. 10-14 m a.s.l. Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15289670; www.inaturalist.org/observations/15289672. 2♀♀, 14-viii-2018, Aosnak River, E Pante Macassar, -9.1821-45°N, 124.4050-94°E, ca. 12-15 m a.s.l. Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14366293; www.inaturalist.org/observations/14366355. 1♂ 1♀, 22-viii-2018, Road to Aosero, W Pante Macassar, -9.2198°N, 124.2939-40°E, ca. 12 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15781507; www.inaturalist.org/observations/15781504. 1♂ 1♀, 9-ix-2018, Lifau environment, W Pante Macassar, -9.2040-41°N, 124.3151°E, ca. 10 m a.s.l., Photos: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16342344; www.inaturalist.org/observations/16343451. 2♂♂ 1♀, 14-ix-2018, Tono estuary, Noefean Bridge, W Pante Macassar, -9.2093-94°N, 124.3120-21°E, ca. 8 m a.s.l., Photos: RMSP. URL (Downloaded on 16.9.2018): www.inaturalist.org/observations/16518851; www.inaturalist.org/observations/16518852; www.inaturalist.org/observations/16518853. 1♂, 15-ix-2018, Pante Macassar, -9.2028°N, 124.3664°E, ca. 7 m a.s.l., Photo: RMSP. URL (Downloaded on 16.9.2018): www.inaturalist.org/observations/16541936. 1♂ 1♀, 1-xi-2018, Kolam Xina environment, W Pante Macassar, -9.2027°N, 124.3117°E, ca. 6 m a.s.l., Photo: RMSP. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/18003354. 4♂♂ 2♀♀, 1-xii-2018, Kolam Xina, W Pante Macassar, -9.2006-07°N, 124.3170-73°E, ca. 4 m a.s.l. Photos: RMSP. URL (Downloaded on 3.12.2018): www.inaturalist.org/observations/18750983; www.inaturalist.org/observations/18750945; www.inaturalist.org/observations/18751983; www.inaturalist.org/observations/18764724. 1♂ 2♀♀, 21-xii-2018, W Pante Macassar, -9.2134-35°N, 124.3107°E, ca. 10 m a.s.l. Photos: RMSP. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19131962; www.inaturalist.org/observations/19131959; www.inaturalist.org/observations/19131960.

6. *Pseudagrion microcephalum* (Rambur, 1842)

TIMOR-LESTE, DILI MUNICIPALITY: 3♂♂, 20-xii-2018, Lake Tasitolu, W Dili, -8.5619-26°N, 125.5012-14°E, ca. 3 m a.s.l., Photos: JPL. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19125712; www.inaturalist.org/observations/19125734; www.inaturalist.org/observations/19125720.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂, 11-viii-2017, Ira-Ara, north of Com, -8.3423°N, 127.0193°E, ca. 96 m a.s.l. Photo: JPL. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15220591. 2♂♂ 1♀, 2-ix-

2018, Seren-Ira, Parlamento, -8.3518°N, 126.9861-65°E, ca. 298-302 m a.s.l., Photos: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16128838; www.inaturalist.org/observations/16129204. 5♂♂ 1♀, 2-xi-2018, Wata-Otcho, north of Com, -8.3414-25°N, 127.0202-13°E, ca. 62-92 m a.s.l., Photos: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18090692; www.inaturalist.org/observations/18090760; www.inaturalist.org/observations/18090692; www.inaturalist.org/observations/18090952. 1♂, 8-xi-2018, Muapusu, south of Com, -8.3711°N, 127.0702°E, ca. 106 m a.s.l., Photo: JPL. URL (Downloaded on 12.11.2018): www.inaturalist.org/observations/18351802.

TIMOR-LESTE, OECUSSE SAR: 1♂ 1♀, 21-vii-2018, Aosnak River, E Pante Macassar, -9.1897°N, 124.4131°E, ca. 22 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14563445. 1♂, 5-viii-2018, SW Pante Macassar, -9.2180°N, 124.3302°E, ca. 18 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15126605. 1♂ 1♀, 8-ix-2018, Tono Bridge, SW Pante Macassar, -9.2706°N, 124.3526°E, ca. 56 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16309334. 1♂ 1♀, 8-ix-2018, SW Pante Macassar, -9.2416°N, 124.3431°E, ca. 36 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16309043. 1♂, 6-x-2018, Rice paddy, Kolam Xina, W Pante Macassar, -9.2036°N, 124.3127°E, ca. 6 m a.s.l., Photo: RMSP. URL (Downloaded on 8.10.2018): www.inaturalist.org/observations/17241445.

7. *Pseudagrion pili dorsum deflexum* Lieftinck, 1936

TIMOR-LESTE, BAUCAU MUNICIPALITY: 4♂♂, 19-x-1973, Fatumaca, 10 km south of Baucau, ca. -8.57°N, 126.39°E, ca. 565 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂, 24-iii-2017, Ira-Ara, north of Com, -8.3423°N, 127.0191°E, ca. 97 m a.s.l. Photo: JPL. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14595556. 1♂, 1-ix-2018, Pipi-Ira, Raca, -8.4442°N, 126.9611°E, ca. 379 m a.s.l., Photo: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16099260. 1♂, 2-ix-2018, Upu-Milan, Mauloho, -8.4455°N, 126.9651°E, ca. 355 m a.s.l., Photo: JPL. URL (Downloaded on 5.9.2018): www.inaturalist.org/observations/16198054. 1♂, 3-xi-2018, Kamin Kuru, south of Com, -8.3678°N, 127.0555°E, ca. 200 m a.s.l., Photo: JPL. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/18055582. 1♂, 2-xi-2018, Wata-Otcho, north of Com, -8.3418°N, 127.0210°E, ca. 71 m a.s.l., Photo: JPL. URL (Downloaded on 07.11.2018): www.inaturalist.org/observations/18091220. 9♂♂ 3♀♀, 8-xi-2018, Muapusu, south of Com, -8.3702-16°N, 127.0694-0706°E, ca. 87-111 m a.s.l., Photos: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18470633; www.inaturalist.org/observations/18361351; www.inaturalist.org/observations/18361809; www.inaturalist.org/observations/18362306; www.inaturalist.org/observations/18362222; www.inaturalist.org/observations/18362207; www.inaturalist.org/observations/18362144; www.inaturalist.org/observations/18362067; www.inaturalist.org/observations/18383797; www.inaturalist.org/observations/18373656.

TIMOR-LESTE, OECUSSE SAR: 1♂, 8-iv-2018, Bolkenat, SE Pante Macassar, -9.2095°N, 124.3821°E, ca. 156 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/10696613. 1♂, 4-viii-2018, Kutete, SE Pante Macassar, -9.2399°N, 124.4275°E, ca. 726 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15098804. 2♂♂, 17-viii-2018, Lokpin spring, Suco Nipane, E Pante Macassar, -9.1827°N, 124.4509-10°E, ca. 121-125 m a.s.l. Photos: RMSP. URL (Downloaded on 17.8.2018): www.inaturalist.org/observations/15537614; www.inaturalist.org/observations/15538732. 1♂, 22-viii-2018, Ulas spring environment, Suco Taiboco, SW Pante Macassar, -9.2694°N, 124.3111°E, ca. 250 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15776920. 1♂, 7-ix-2018, Oerupan, E Pante Macassar, -9.1775°N, 124.4394°E, ca. 84 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16304433. 1♂, 29-ix-2018, Oelulan, NE Oesilo, -9.3169°N, 124.4043°E, ca. 535 m a.s.l., Photo: RMSP. URL (Downloaded on 30.9.2018): www.inaturalist.org/observations/17019541. 1♂, 28-xi-2018, Bolkenat, SE Pante Macassar, -9.2124°N, 124.3835°E, ca. 150 m a.s.l., Photo: RMSP. URL (Downloaded on 28.11.2018): www.inaturalist.org/observations/18689706.

8. *Xiphiagrion cyanomelas* Selys, 1876

TIMOR-LESTE, LAUTEM MUNICIPALITY: 2♂♂ 1♀, 8-xi-2018, Muapusu, south of Com, -8.3709-10°N, 127.0702-03°E, ca. 103-104 m a.s.l., Photos: JPL. URL (Downloaded on 12.11.2018): www.inaturalist.org/observations/18351731; www.inaturalist.org/observations/18351686.

TIMOR-LESTE, OECUSSE SAR: 1♂, 21-vii-2018, Aosnak River, E Pante Macassar, -9.1897°N, 124.4131°E, ca. 22 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14563394.

Platycnemididae

9. *Nososticta impercepta* Seehausen & Theischinger, 2017

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♀, 1-ix-2018, Noro-Lata, Raca, -8.4439°N, 126.9621°E, ca. 385 m a.s.l., Photo: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16096109. 2♂♂ 1♀, 2-ix-2018, Upu-Milan, Mauloho, -8.4456°N, 126.9649°E, ca. 352 m a.s.l., Photo: JPL. URL (Downloaded on 5.9.2018): www.inaturalist.org/observations/16197987. 2♂♂, 3-xi-2018, Kamin Kuru, Com, -8.3675-78°N, 127.0559-60°E, ca. 190-200 m a.s.l., Photo: JPL. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/18055702; www.inaturalist.org/observations/18055759. 5♂♂ 3♀♀, 8-xi-2018, Muapusu, south of Com, -8.3707-16°N, 127.0702-05°E, ca. 97-111 m a.s.l., Photos: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18470264; www.inaturalist.org/observations/18361713; www.inaturalist.org/observations/18383551; www.inaturalist.org/observations/18385047; www.inaturalist.org/observations/18446635.

TIMOR-LESTE, OECUSSE SAR: 1♂ 2♀♀, 30-vi-2018, Bolkenat, SE Pante Macassar, -9.2124°N, 124.3835°E, ca. 150 m a.s.l. Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/13907552; www.inaturalist.org/observations/13907343. 6♂♂ 1♀ & Exuvia, 8-viii-2018, Bolkenat, SE Pante Macassar, -9.2120-24°N, 124.3835-37°E, ca. 150-160 m a.s.l. Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15242337; www.inaturalist.org/observations/15225996; www.inaturalist.org/observations/15220268; www.inaturalist.org/observations/15224736; www.inaturalist.org/observations/15220270; www.inaturalist.org/observations/15220269; www.inaturalist.org/observations/15220267. 2♂♂ & Exuvia (4 collected), 17-viii-2018, Lokpin spring, Suco Nipane, E Pante Macassar, -9.1827°N, 124.4510°E, ca. 121 m a.s.l. Photos: RMSP. URL (Downloaded on 17.8.2018): www.inaturalist.org/observations/15537609; www.inaturalist.org/observations/15537727; www.inaturalist.org/observations/15538412. 2♂♂ 2♀♀, 7-ix-2018, Oerupan, E Pante Macassar, -9.1882-83°N, 124.4635°E, ca. 82-86 m a.s.l., Photos: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16279286; www.inaturalist.org/observations/16279287; www.inaturalist.org/observations/16279290; www.inaturalist.org/observations/16279291. 1♂, 28-xi-2018, Bolkenat, SE Pante Macassar, -9.2096°N, 124.3820°E, ca. 146 m a.s.l., Photo: RMSP. URL (Downloaded on 28.11.2018): www.inaturalist.org/observations/18687778.

Aeshnidae

10. *Anax guttatus* (Burmeister, 1839)

TIMOR-LESTE, AINARO MUNICIPALITY: 1♀, 19-x-1973, Maubisse, ca. - 8.84°N, 125.60°E, ca. 1392 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂, 2-vi-2017, Com Beach Resort, Com, -8.3571°N, 127.0577°E, ca. 8 m a.s.l. Photo: JPL. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15220572. 1♂, 3-vi-2017, Com, -8.3610°N, 127.0602°E, ca. 26 m a.s.l. Photo: JPL. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/6490563.

TIMOR-LESTE, OECUSSE SAR: 1♂, 23-iv-2018, Pante Macassar, -9.2017°N, 124.3459°E, ca. 8 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14036731.

11. *Gynacantha* sp. cf. *dobsoni* Fraser, 1951

TIMOR-LESTE, OECUSSE SAR: 1♂, 19-ix-2018, Aosnak river, E Pante Macassar, -9.1833°N, 124.4074°E, ca. 14 m a.s.l. Photo: RMSP. URL (Downloaded on 20.9.2018): www.inaturalist.org/observations/16683293.

Libellulidae

12. *Brachythemis contaminata* (Fabricius, 1793)

INDONESIA, EAST NUSA TENGGARA, ROTE NDAO REGENCY: 3♂♂, 24-vii-2018, Danau Tua, -10.8538-40°N, 122.9222°E, ca. 74 m a.s.l. Photos: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14710930; www.inaturalist.org/observations/14710910; www.inaturalist.org/observations/14710713. 2♂♂, 27-vii-2018, Danau Tua, -10.8538°N, 122.9220-21°E, ca. 74 m a.s.l. Photos: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14825976; www.inaturalist.org/observations/14826001. 1♂, 8-xii-2018, Danau Manubulu, -10.7102°N, 123.1005°E, ca. 103 m a.s.l. Photo: CRT. URL (Downloaded on 10.12.2018): www.inaturalist.org/observations/18893017

INDONESIA, EAST NUSA TENGGARA, KUPANG REGENCY: 1♂ 1♀, 7-xi-2016, Tilong Dam, E Kupang City, -10.1857-99°N, 123.7476-7501°E, ca. 91-97 m a.s.l. Photos: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/5067197; www.inaturalist.org/observations/4654309. 1♂, 12-viii-2018, E Kupang City, -10.1232°N, 123.7078°E, ca. 8 m a.s.l. Photo: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/15339233. 1♂, 22-xii-2018, E Kupang City, -10.1245°N, 123.6984°E, ca. 7 m a.s.l. Photo: CRT. URL (Downloaded on 22.12.2018): www.inaturalist.org/observations/19149466.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 2♂♂, 8-xi-2018, Muapusu, south of Com, -8.3399-3701°N, 127.0717-19°E, ca. 75-78 m a.s.l. Photos: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18470903; www.inaturalist.org/observations/18470858.

TIMOR-LESTE, OECUSSE SAR: 1♂, 8-ix-2018, SW Pante Macassar, -9.2416°N, 124.3431°E, ca. 36 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16308379. 1♂, 9-ix-2018, Lifau environment, W Pante Macassar, -9.2041°N, 124.3151°E, ca. 10 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16341571. 1♀, 17-ix-2018, Lifau environment, W Pante Macassar, -9.2039°N, 124.3152°E, ca. 10 m a.s.l., Photo: RMSP. URL (Downloaded on 18.9.2018): www.inaturalist.org/observations/16624641. 1♀, 5-x-2018, Rice paddy, Kolam Xina, W Pante Macassar, -9.2040°N, 124.3130°E, ca. 6 m a.s.l., Photo: RMSP. URL (Downloaded on 8.10.2018): www.inaturalist.org/observations/17211413. 4♂♂, 17-xi-2018, SW Pante Macassar, -9.2229-30°N, 124.3332°E, ca. 24 m a.s.l., Photos: RMSP. URL (Downloaded on 17.11.2018): www.inaturalist.org/observations/18439539; www.inaturalist.org/observations/18439540; www.inaturalist.org/observations/18439538; www.inaturalist.org/observations/18439537. 1♂ 1♀, 21-xii-2018, W Pante Macassar, -9.2131-32°N, 124.3105°E, ca. 10 m a.s.l. Photos: RMSP. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19131888; www.inaturalist.org/observations/19131885.

13. *Crocothemis servilia* (Drury, 1773)

INDONESIA, EAST NUSA TENGGARA, ROTE NDAO REGENCY: 1♂, 10-xii-2018, Kuli village environment, -10.8530°N, 123.0580°E, ca. 3 m a.s.l. Photo: CRT. URL (Downloaded on 13.12.2018): www.inaturalist.org/observations/18956310. 1♂, 15-xii-2018, NW of Oelunggu, -10.7452°N, 123.0499°E, ca. 92 m a.s.l. Photo: CRT. URL (Downloaded on 15.12.2018): www.inaturalist.org/observations/19025100.

INDONESIA, EAST NUSA TENGGARA, KUPANG REGENCY: 3♂♂ 1♀, 22-xii-2018, E Kupang City, -10.1016-20°N, 123.7498-7505°E, ca. 7 m a.s.l. Photos: CRT. URL (Downloaded on 22.12.2018): www.inaturalist.org/observations/19149456; www.inaturalist.org/observations/19149451; www.inaturalist.org/observations/19149441; www.inaturalist.org/observations/19149460. 1♂ 1♀, 26-xii-2018, Oesapa fishponds, Kupang, -10.1461-64°N, 123.6366-67°E, ca. 5-6 m a.s.l. Photos: CRT. URL (Downloaded on 27.12.2018): www.inaturalist.org/observations/19224364; www.inaturalist.org/observations/19224349.

TIMOR-LESTE, ERMERA MUNICIPALITY: 1♂, 5-vii-2018, Gleno, -8.7171°N, 125.4381°E, ca. 700 m a.s.l. Photo: JPL. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/5041468.

TIMOR-LESTE, DILI MUNICIPALITY: 2♂♂ 1♀, 22-xi-2018, Rua da Minha, Ai-Tarak-Laran, Dili, -8.5491-5501°N, 125.5646-47°E, ca. 3-4 m a.s.l. Photos: JPL. URL (Downloaded on 22.11.2018): www.inaturalist.org/observations/18555892; www.inaturalist.org/observations/18556240; www.inaturalist.org/observations/18562047. 3♀♀, 22-xi-2018, Avenida de Portugal, Dili, -8.5488-90°N, 125.5647°E, ca. 3 m a.s.l., Photos: JPL. URL (Downloaded on 23.11.2018): www.inaturalist.org/observations/18564323; www.inaturalist.org/observations/18564225; www.inaturalist.org/observations/18564473. 2♂♂, 20-xii-2018, Lake Tasitolu, W Dili, -8.5620-25°N, 125.5080-92°E, ca. 0-2 m a.s.l., Photos: JPL. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19127015; www.inaturalist.org/observations/19126579.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 4♂♂ 1♀, 2-xi-2018, Ira-Ara, north of Com, -8.3420-22°N, 127.0192-208°E, ca. 77-96 m a.s.l., Photos: JPL. URL (Downloaded on 07.11.2018): www.inaturalist.org/observations/18106592; www.inaturalist.org/observations/18105048; www.inaturalist.org/observations/18108033; www.inaturalist.org/observations/18105242; www.inaturalist.org/observations/18091012.

TIMOR-LESTE, OECUSSE SAR: 1♂, 21-v-2018, Pante Macassar, -9.1985°N, 124.3582°E, ca. 6 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/12671061. 1♂, 6-vii-2018, Lifau environment, W Pante Macassar, -9.2009°N, 124.3178°E, ca. 5 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14102653#comment-1910533. 1♀, 14-vii-2018, Lifau environment, W Pante Macassar, -9.1993° N, 124.3119° E, ca. 5 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14339040. 1♂, 21-vii-2018, Lifau environment, W Pante Macassar, -9.2037°N, 124.3060°E, ca. 2 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14565917. 2♂♂, 21-

vii-2018, Aosnak river, E Pante Macassar, -9.1928-59°N, 124.4160-4217°E, ca. 26-32 m a.s.l. Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14562891; www.inaturalist.org/observations/14562717. 1♂ 1♀, 22-viii-2018, Ulas site, SW Pante Macassar, -9.2740-41°N, 124.3480-81°E, ca. 56-57 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15777131; www.inaturalist.org/observations/15777133. 1♂, 22-viii-2018, Road to Aosero, W Pante Macassar, -9.2199°N, 124.2939°E, ca. 11 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15781508. 1♂, 8-ix-2018, Tono river environment, SW Pante Macassar, -9.2416°N, 124.3331°E, ca. 34 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16309333. 1♂, 8-ix-2018, Tono Bridge, SW Pante Macassar, -9.2706°N, 124.3526°E, ca. 56 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16309336. 1♂ 1♀, 9-ix-2018, Lifau environment, W Pante Macassar, -9.2039-41°N, 124.3150-52°E, ca. 10 m a.s.l., Photos: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16341192; www.inaturalist.org/observations/16341191. 1♂ 1♀, 12-ix-2018, Lifau environment, W Pante Macassar, -9.2039°N, 124.3152°E, ca. 0 m a.s.l., Photos: RMSP. URL (Downloaded on 13.9.2018): www.inaturalist.org/observations/16469071; www.inaturalist.org/observations/16469068. 1 unknown sex, 14-ix-2018, Tono estuary, Noefefan Bridge, W Pante Macassar, -9.2094°N, 124.3119°E, ca. 8 m a.s.l., RMSP det., see comment at URL www.inaturalist.org/observations/16518854. 2♂♂ 1♀, 6-x-2018, Rice paddy, Kolam Xina, W Pante Macassar, -9.2034-37°N, 124.3127-29°E, ca. 6 m a.s.l., Photos: RMSP. URL (Downloaded on 8.10.2018): www.inaturalist.org/observations/17241439; www.inaturalist.org/observations/17241437; www.inaturalist.org/observations/17245959. 1♂, 7-xi-2018, Kolam Xina, W Pante Macassar, -9.2041°N, 124.3127°E, ca. 13 m a.s.l. Photo: RMSP. URL (Downloaded on 7.11.2018): www.inaturalist.org/observations/18208581. 1♀, 8-xi-2018, Kolam Xina, W Pante Macassar, -9.2041°N, 124.3122°E, ca. 12 m a.s.l. Photo: RMSP. URL (Downloaded on 11.11.2018): www.inaturalist.org/observations/18280587. 3♀♀, 1-xii-2018, Kolam Xina, W Pante Macassar, -9.2003-07°N, 124.3166-73°E, ca. 4-5 m a.s.l. Photos: RMSP. URL (Downloaded on 3.12.2018): www.inaturalist.org/observations/18756361; www.inaturalist.org/observations/18751979; www.inaturalist.org/observations/18750942. 1♂, 21-xii-2018, W Pante Macassar, -9.2132°N, 124.3103°E, ca. 10 m a.s.l. Photos: RMSP. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19131886.

14. *Diplacodes trivialis* (Rambur, 1842)

INDONESIA, EAST NUSA TENGGARA, ROTE NDAO REGENCY: 1♀, 26-vii-2018, Nemberala area, -10.8545°N, 122.8306°E, ca. 7 m a.s.l. Photo: CRT. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/14742975. 4♂♂ 1♀, 24-vii-2018, Danau Tua, -10.8537-38°N, 122.9221-23°E, ca. 74-75 m a.s.l. Photos: CRT. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/14710785; www.inaturalist.org/observations/14710724; www.inaturalist.org/observations/14710701; www.inaturalist.org/observations/14710392. 1♂, 8-viii-2018, Northwestern Rote Ndao Regency, -10.7810°N, 122.8153°E, ca. 3 m a.s.l. Photo: CRT. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/15256743. 1♂ 1♀, 8-viii-2018, Southwestern Rote Ndao Regency, -10.8471-8532°N, 122.9176-9219°E, ca. 72-76 m a.s.l. Photos: CRT. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/15257051; www.inaturalist.org/observations/15257163. 1♂, 8-xii-2018, Danau Manubulu, -10.7109°N, 123.1010°E, ca. 115 m a.s.l. Photo: CRT. URL (Downloaded on 10.12.2018): www.inaturalist.org/observations/18892982.

INDONESIA, EAST NUSA TENGGARA, KUPANG REGENCY: 2♂♂ 2♀♀, 10-viii-2018, E Kupang City, -10.1017-32°N, 123.7497-7503°E, ca. 7-9 m a.s.l. Photos: CRT. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/15281433; www.inaturalist.org/observations/15281420; www.inaturalist.org/observations/15281386; www.inaturalist.org/observations/15281486. 2♂♂ 1♀, 11-viii-2018, E Kupang City, -10.1018-46°N, 123.7160-91°E, ca. 1-5 m a.s.l. Photos: CRT. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/15339540; www.inaturalist.org/observations/15339483; www.inaturalist.org/observations/15339496. 4♂♂ 1♀, 12-viii-2018, E Kupang City, -10.1209-42°N, 123.7054-76°E, ca. 6-9 m a.s.l. Photos: CRT. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/15339366; www.inaturalist.org/observations/15339342; www.inaturalist.org/observations/15339310; www.inaturalist.org/observations/15339121; www.inaturalist.org/observations/15339277. 3♂♂, 22-xii-2018, E Kupang City, -10.1011-17°N, 123.7496-7505°E, ca. 6-7 m a.s.l. Photos: CRT. URL (Downloaded on 22.12.2018): www.inaturalist.org/observations/19149432; www.inaturalist.org/observations/19149447; www.inaturalist.org/observations/19149443. 1♂ 1♀, 26-xii-2018, Oesapa fishponds, Kupang, -10.1470°N, 123.6353-56°E, ca. 6 m a.s.l. Photos: CRT. URL (Downloaded on 27.12.2018): www.inaturalist.org/observations/19224445; www.inaturalist.org/observations/19224429.

TIMOR-LESTE, BAUCAU MUNICIPALITY: 5♂♂ 7♀♀ & 1 sex not definable, 18-x-1973, Baucau, ca. -8.47°N, 126.45°E, ca. 439 m a.s.l., Tom Weir leg., MAGNT. 1♂, 8-v-2010, Mazzarello Guesthouse, Venilale, -8.6405°N, 126.3812°E, ca. 839 m a.s.l. Photo: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/5067118.

TIMOR-LESTE, DILI MUNICIPALITY: 3♂♂, 20-xii-2018, Lake Tasitolu, W Dili, -8.5621-72°N, 125.5041-5106°E, ca. 0 m a.s.l., Photos: JPL. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19127295; www.inaturalist.org/observations/19126588;

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂, 22-v-2016, Ou Swamp, SW Lospalos, -8.5368°N, 126.9752°E, ca. 383 m a.s.l. Photo: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/5067880. 1♂, 23-v-2016, Hotel Roberto Carlos, Lospalos, -8.5136°N, 127.0042°E, ca. 383 m a.s.l. Photo: CRT. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/5221206. 3♂♂ 2♀♀, 4-xi-2018, Kaisala-Hot, Com, -8.3619-24°N, 127.0625-26°E, ca. 2-6 m a.s.l., Photos: JPL. URL (Downloaded on 07.11.2018): www.inaturalist.org/observations/18116629; www.inaturalist.org/observations/18116530; www.inaturalist.org/observations/18116489; www.inaturalist.org/observations/18116448; www.inaturalist.org/observations/18116404. 1♀, 8-xi-2018, Ira-Ara, Com, -8.3355°N, 127.0189°E, ca. 5 m a.s.l., Photo: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18470401. 1♀, 9-xi-2018, Kaisala-Hot, Com, -8.3624°N, 127.0623°E, ca. 6 m a.s.l., Photo: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18470556. 1♂, 9-xi-2018, Ira-Ara Alepala, Com, -8.3384°N, 127.0233°E, ca. 11 m a.s.l., Photos: JPL. URL (Downloaded on 11.11.2018): www.inaturalist.org/observations/18313480.

TIMOR-LESTE, OECUSSE SAR: 2♂♂, 5-iv-2018, Pante Macassar, -9.2019°N, 124.3460°E, ca. 8 m a.s.l. Photos: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/14037090; www.inaturalist.org/observations/14037144. 1♂, 7-iv-2018, Pante Macassar, -9.2018°N, 124.3461°E, ca. 8 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/10674954. 1♂, 23-iv-2018, Pante Macassar, -9.2019°N, 124.3461°E, ca. 8 m a.s.l. Photo: RMSP. URL (Downloaded on 16.8.2018): www.inaturalist.org/observations/13912302. 1♂, 6-vii-2018, Lifau environment, W Pante Macassar, -9.2002°N, 124.3158°E, ca. 7 m a.s.l. Photo: RMSP. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/14102118. 1♂ 1♀, 6-vii-2018, Pante Macassar, -9.1985-88°N, 124.3714-17°E, ca. 9 m a.s.l. Photos: RMSP. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/14101558; www.inaturalist.org/observations/14101614. 1♂ 1♀, 14-vii-2018, Aosnak River, E Pante Macassar, -9.1836-75° N 124.4062-4108° E, ca. 21-22 m a.s.l. Photos: RMSP. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/14342368. 1♂ 1♀, 14-vii-2018, Lifau environment, W Pante Macassar, -9.1993-2029° N 124.3066-3116° E, ca. 4-5 m a.s.l. Photos: RMSP. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/14339833. 1♂, 21-vii-2018, Aosnak River, E Pante Macassar, -9.1928°N, 124.4151°E, ca. 25 m a.s.l. Photo: RMSP. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/14562756. 1♂ 1♀, 21-vii-2018, Lifau environment, W Pante Macassar, -9.2011°N, 124.3076°E, ca. 5 m a.s.l. Photos: RMSP. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/14566062; www.inaturalist.org/observations/14566061. 1♀, 5-viii-2018, SW Pante Macassar, -9.2179°N, 124.3299°E, ca. 18 m a.s.l. Photo: RMSP. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/15131152. 3♂♂, 10-viii-2018, Aosnak River, E Pante Macassar, -9.1811-15°N, 124.4046-48°E, ca. 11-13 m a.s.l. Photos: RMSP. URL (Downloaded on 20.8.2018): www.inaturalist.org/observations/15289665; www.inaturalist.org/observations/15290532; www.inaturalist.org/observations/15289671. 1♂, 22-viii-2018, Ulas spring environment, Suco Taiboco, SW Pante Macassar, -9.2691°N, 124.3113°E, ca. 245 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15776680. 1♂, 22-viii-2018, Noenoe Heno environment, S Pante Macassar, -9.2740°N, 124.3480°E, ca. 56 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15777132. 1♂, 25-viii-2018, Kolam Xina, W Pante Macassar, -9.1994°N, 124.3099°E, ca. 4 m a.s.l. Photo: RMSP. URL (Downloaded on 25.8.2018): www.inaturalist.org/observations/15869170. 2♂♂, 9-ix-2018, Lifau environment, W Pante Macassar, -9.2040-41°N, 124.3151°E, ca. 10 m a.s.l., Photos: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16343062; www.inaturalist.org/observations/16341570. 2♀♀, 14-ix-2018, Tono estuary, Noefefan Bridge, W Pante Macassar, -9.2086-94°N, 124.3119-25°E, ca. 8 m a.s.l., Photos: RMSP. URL (Downloaded on 16.9.2018): www.inaturalist.org/observations/16518854; www.inaturalist.org/observations/16519216. 1♂ 1♀, 17-ix-2018, Lifau environment, W Pante Macassar, -9.1996-2039°N, 124.3111-3153°E, ca. 6-11 m a.s.l., Photos: RMSP. URL (Downloaded on 18.9.2018): www.inaturalist.org/observations/16624642; www.inaturalist.org/observations/16624644. 1♂ 1♀, 6-x-2018, Rice paddy, Kolam Xina, W Pante Macassar, -9.2035-36°N, 124.3127-29°E, ca. 6 m a.s.l., Photos: RMSP. URL (Downloaded on 8.10.2018): www.inaturalist.org/observations/17241443; www.inaturalist.org/observations/17241441. 1♀, 17-xi-2018, SW Pante Macassar, -9.2229-30°N, 124.3332°E, ca. 24 m a.s.l., Photo: RMSP. URL (Downloaded on 17.11.2018): www.inaturalist.org/observations/18439535. 1♂, 27-xi-2018, Kolam Xina, W Pante Macassar, -9.2023°N, 124.3180°E, ca. 8 m a.s.l. Photo: RMSP. URL (Downloaded on 27.11.2018): www.inaturalist.org/observations/18671428. 1♀, 1-xii-2018, Kolam Xina, W Pante Macassar, -9.2007°N, 124.3174°E, ca. 4 m a.s.l. Photo: RMSP. URL (Downloaded

on 3.12.2018): www.inaturalist.org/observations/18750940. 1♀, 5-xii-2018, Pante Macassar, -9.2019°N, 124.3461°E, ca. 8 m a.s.l. Photo: RMSP. URL (Downloaded on 7.12.2018): www.inaturalist.org/observations/18840384. 1♂ 1♀, 21-xii-2018, W Pante Macassar, -9.2135°N, 124.3108°E, ca. 10 m a.s.l. Photos: RMSP. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19131958; www.inaturalist.org/observations/19131957.

15. *Macrodiplax cora* (Brauer, 1867)

INDONESIA, EAST NUSA TENGGARA, ROTE NDAO REGENCY: 3♂♂ 1♀, 24-vii-2018, Danau Tua, -10.8539°N, 122.9219-20°E, ca. 73-74 m a.s.l. Photos: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14826024; www.inaturalist.org/observations/14710489; www.inaturalist.org/observations/14710445. 1♂ 1♀, 8-viii-2018, Danau Tua, -10.8538-40°N, 122.9220-21°E, ca. 73-74 m a.s.l. Photos: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15257237; www.inaturalist.org/observations/15257089. 2♂♂, 16-xii-2018, Danau Oendui, -10.5561°N, 123.2994°E, ca. 7 m a.s.l. Photos: CRT. URL (Downloaded on 17.12.2018): www.inaturalist.org/observations/19046154; www.inaturalist.org/observations/19046164.

16. *Neurothemis ramburii* (Brauer, 1866)

TIMOR-LESTE, BAUCAU MUNICIPALITY: 3♂♂, 18-x-1973, Baucau, ca. -8.47°N, 126.45°E, ca. 439 m a.s.l., Tom Weir leg., MAGNT. 2♂♂, 19-x-1973, Fatumaca, 10 km south of Baucau, ca. -8.57°N, 126.39°E, ca. 565 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, ERMERA MUNICIPALITY: 1♂, 24-iii-2017, Gleno, -8.7236°N, 125.4419°E, ca. 732 m a.s.l. Photo: JPL. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/7978274.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♀, 4-vi-2017, Com, -8.3598°N, 127.0593°E, ca. 22 m a.s.l. Photo: JPL. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/6490534. 2♀♀, 1-ix-2018, Noro-Lata, Raca, -8.4429-39°N, 126.9654-9707°E, ca. 393-402 m a.s.l., Photos: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16096799; www.inaturalist.org/observations/16097203. 2♂♂, 1-ix-2018, Pipi-Ira, Raca, -8.4447°N, 126.9578-9605°E, ca. 366-367 m a.s.l., Photos: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16096601; www.inaturalist.org/observations/16097506. 2♂♂, 2-ix-2018, Upu-Milan, Mauloho, -8.4451°N, 126.9648°E, ca. 359 m a.s.l., Photo: JPL. URL (Downloaded on 5.9.2018): www.inaturalist.org/observations/16197924. 1♂, 2-xi-2018, Wata-Otcho, north of Com, -8.3422°N, 127.0207°E, ca. 81 m a.s.l., Photo: JPL. URL (Downloaded on 07.11.2018): www.inaturalist.org/observations/18091076.

TIMOR-LESTE, OECUSSE SAR: 1♂, 14-vii-2018, Aosnak River, E Pante Macassar, -9.1849°N, 124.4096°E, ca. 17 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14338308. 5♂♂ (ca. 10 observed), 21-vii-2018, Aosnak River, E Pante Macassar, -9.1840°N, 124.4066-67°E, ca. 26-27 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14563260; www.inaturalist.org/observations/14563261; www.inaturalist.org/observations/14563263; www.inaturalist.org/observations/14563256; www.inaturalist.org/observations/14563259.

17. *Orthetrum caledonicum* (Brauer, 1865)

TIMOR-LESTE, BAUCAU MUNICIPALITY: 2♂♂, 19-x-1973, Fatumaca, 10 km south of Baucau, ca. -8.57°N, 126.39°E, ca. 565 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 6♂♂ 1♀, 2-xi-2018, Ira-Ara, north of Com, -8.3421-22°N, 127.0192-93°E, ca. 95-96 m a.s.l., Photos: JPL. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/18075580; www.inaturalist.org/observations/18075830; www.inaturalist.org/observations/18075741; www.inaturalist.org/observations/18080983; www.inaturalist.org/observations/18078986; www.inaturalist.org/observations/18079151. 4♂♂, 2-xi-2018, Wata-Otcho, north of Com, -8.3419-23°N, 127.0203-10°E, ca. 73-86 m a.s.l., Photos: JPL. URL (Downloaded on 07.11.2018): www.inaturalist.org/observations/18102374; www.inaturalist.org/observations/18104765; www.inaturalist.org/observations/18091471; www.inaturalist.org/observations/18091401.

18. *Orthetrum glaucum* (Brauer, 1865)

TIMOR-LESTE, AILEU MUNICIPALITY: 5♂♂, 6-xii-2018, Be Tuda Berloi Waterfall, -8.6454°N, 125.5249-50°E, ca. 526-527 m a.s.l., Photos: JPL. URL (Downloaded on 7.12.2018): www.inaturalist.org/observations/18871742; www.inaturalist.org/observations/18871455; www.inaturalist.org/observations/18871691; www.inaturalist.org/observations/18871574; www.inaturalist.org/observations/18871488.

TIMOR-LESTE, OECUSSE SAR: 2♂♂, 29-ix-2018, Oelulan, NE Oesilo, -9.3189°N, 124.4047-48°E, ca. 508 m a.s.l., Photos: RMSP. URL (Downloaded on 30.9.2018): www.inaturalist.org/observations/17019097; www.inaturalist.org/observations/17019654.

19. *Orthetrum pruinosum schneideri* Förster, 1903

TIMOR-LESTE, AILEU MUNICIPALITY: 1♂, 5-xii-2018, Be Tuda Berloi Waterfall, -8.6453°N, 125.5251°E, ca. 536 m a.s.l., Photo: JPL. URL (Downloaded on 13.12.2018): www.inaturalist.org/observations/18955334.

TIMOR-LESTE, DILI MUNICIPALITY: 1♂, 27-x-2018, Tuda Tiris Waterfall, south of Dili, -8.6175°N, 125.5565°E, ca. 496 m a.s.l., Photo: JPL. URL (Downloaded on 29.10.2018): www.inaturalist.org/observations/17892898.

20. *Orthetrum sabina* (Drury, 1773)

INDONESIA, EAST NUSA TENGGARA, ROTE NDAO REGENCY: 1♂ 1♀, 24-vii-2018, Danau Tua, -10.8538°N, 122.9222°E, ca. 74 m a.s.l. Photos: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14710944; www.inaturalist.org/observations/14710752. 2♂♂, 8-viii-2018, Danau Tua, -10.8538-40°N, 122.9222°E, ca. 74 m a.s.l. Photos: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15257204; www.inaturalist.org/observations/15257114. 4♂♂ 2♀♀, 9-xii-2018, E of Oelunggu, -10.7453-7558°N, 123.0998-1065°E, ca. 145-149 m a.s.l. Photos: CRT. URL (Downloaded on 13.12.2018): www.inaturalist.org/observations/18956489; www.inaturalist.org/observations/18956428; www.inaturalist.org/observations/18956472; www.inaturalist.org/observations/18956375; www.inaturalist.org/observations/18956394. 1♂ 1♀, 16-xii-2018, Danau Oendui, -10.5554°N, 123.2994°E, ca. 14 m a.s.l. Photo: CRT. URL (Downloaded on 17.12.2018): www.inaturalist.org/observations/19046170.

INDONESIA, EAST NUSA TENGGARA, KUPANG REGENCY: 3♂♂, 11-viii-2018, E Kupang City, -10.1030-56°N, 123.7120-77°E, ca. 4-12 m a.s.l. Photos: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15339548; www.inaturalist.org/observations/15339529; www.inaturalist.org/observations/15339518. 1♂, 26-xii-2018, Oesapa fishponds, Kupang, -10.1463°N, 123.6366°E, ca. 5 m a.s.l. Photo: CRT. URL (Downloaded on 27.12.2018): www.inaturalist.org/observations/19224356.

TIMOR-LESTE, AILEU MUNICIPALITY: 1♂ 1♀, 29-i-2017, Selo-Kraik, -8.7131°N, 125.5283°E, ca. 1088 m a.s.l. Photo: JPL. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/8010588.

TIMOR-LESTE, BAUCAU MUNICIPALITY: 4♂♂ 2♀♀ & 1 sex not definable, 18-x-1973, Baucau, ca. -8.47°N, 126.45°E, ca. 439 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, DILI MUNICIPALITY: 1♂, 22-xi-2018, Avenida de Portugal, Dili, -8.5487°N, 125.5647°E, ca. 2 m a.s.l., Photo: JPL. URL (Downloaded on 23.11.2018): www.inaturalist.org/observations/18564616.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂ 1♀, 22-v-2016, Ou Swamp, SW Lospalos, -8.5366°N, 126.9751°E, ca. 431 m a.s.l. Photo: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/5067878. 1♂, 2-ix-2018, Seren-Ira, Parlamento, -8.3519°N, 126.9865°E, ca. 304 m a.s.l., Photo: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16128376. 1♂ 1♀, 3-xi-2018, Kamin Kuru, Com, -8.3701°N, 127.0520°E, ca. 263 m a.s.l., Photo: JPL. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/18054035. 1♂, 2-xi-2018, Ira-Ara, north of Com, -8.3421°N, 127.0193°E, ca. 95 m a.s.l., Photo: JPL. URL (Downloaded on 07.11.2018): www.inaturalist.org/observations/18107413.

TIMOR-LESTE, OECUSSE SAR: 1♂, 14-vii-2018, Aosnak River, E Pante Macassar, -9.1843°N, 124.4091°E, ca. 16 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14338722. 1♂, 21-vii-2018, Aosnak River, E Pante Macassar, -9.1897°N, 124.4131°E, ca. 22 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14562846. 1♂, 5-viii-2018, SW Pante Macassar, -9.2179°N, 124.3300°E, ca. 18 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15125145. 1♂, 22-viii-2018, Ulas spring environment, Suco Taiboco, SW Pante Macassar, -9.2692°N, 124.3113°E, ca. 248 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15776845. 1♂ 1♀, 22-viii-2018, Road to Aosero, W Pante Macassar, -9.2198°N, 124.2939°E, ca. 12 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15781897; www.inaturalist.org/observations/15781506. 2♂♂, 22-viii-2018, SW Pante Macassar, -9.2739-40°N, 124.3478-79°E, ca. 56-58 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15777130; www.inaturalist.org/observations/15777129. 1♂, 25-viii-2018, Kolam Xina, W Pante Macassar, -9.1995°N, 124.3109°E, ca. 5 m a.s.l. Photo: RMSP. URL (Downloaded on 25.8.2018): www.inaturalist.org/observations/15869168. 1♂, 8-ix-2018, SW Pante Macassar, -9.2416°N, 124.3431°E, ca. 36 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16309335. 1♀ (?), 15-ix-2018, Pante Macassar, -9.2028°N, 124.3664°E, ca. 7 m a.s.l., Photo: RMSP. URL (Downloaded on 16.9.2018): www.inaturalist.org/observations/16541935. 1♂, 17-ix-2018, Lifau environment, W Pante Macassar, -9.1996°N, 124.3116°E, ca. 6 m a.s.l., Photo: RMSP. URL (Downloaded on 18.9.2018): www.inaturalist.org/observations/16624645. 1♀, 24-ix-2018, SW Pante Macassar, -9.2200°N,

124.3284°E, ca. 18 m a.s.l. Photo: RMSP. URL (Downloaded on 25.9.2018): www.inaturalist.org/observations/16879258. 2♂♂, 6-x-2018, Rice paddy, Kolam Xina, W Pante Macassar, -9.2032-33°N, 124.3125-26°E, ca. 6 m a.s.l., Photos: RMSP. URL (Downloaded on 8.10.2018): www.inaturalist.org/observations/17241436; www.inaturalist.org/observations/17241444. 1♂ 1♀, 1-xi-2018, Kolam Xina environment, W Pante Macassar, -9.2041°N, 124.3123°E, ca. 12 m a.s.l., Photo: RMSP. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/18002043. 1♂, 1-xii-2018, Kolam Xina, W Pante Macassar, -9.2007°N, 124.3172°E, ca. 4 m a.s.l. Photo: RMSP. URL (Downloaded on 3.12.2018): <https://www.inaturalist.org/observations/18750941>. 1♂, 21-xii-2018, W Pante Macassar, -9.2133°N, 124.3103°E, ca. 10 m a.s.l. Photos: RMSP. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19131887.

TIMOR-LESTE, VIQUEQUE MUNICIPALITY: 1♂, 26-ix-2015, Loi-Huno, Ossu, -8.7841°N, 126.3747°E, ca. 244 m a.s.l. Photo: Stephen Kearney. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/2007772.

21. *Orthetrum festaceum* (Burmeister, 1839)

INDONESIA, MALUKU, MALUKU BARAT DAYA REGENCY: 1♂, 25-x-2010, Lakuwahi, Romang Island -7.6079°N, 127.3576°E, ca. 381 m a.s.l. Photo: CRT. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/17873614.

TIMOR-LESTE, AILEU MUNICIPALITY: 2♂♂ 1♀, 5-xii-2018, Be Tuda Berloi Waterfall, -8.6452°N, 125.5252°E, ca. 545 m a.s.l., Photos: JPL. URL (Downloaded on 13.12.2018): www.inaturalist.org/observations/18956019; www.inaturalist.org/observations/18955893.

TIMOR-LESTE, BAUCAU MUNICIPALITY: 1♂, 18-x-1973, Baucau, ca. -8.47°N, 126.45°E, ca. 439 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, DILI MUNICIPALITY: 1♂, 27-x-2018, Tuda Tiris Waterfall, south of Dili, -8.6175°N, 125.5565°E, ca. 496 m a.s.l., Photo: JPL. URL (Downloaded on 29.10.2018): www.inaturalist.org/observations/17891507.

TIMOR-LESTE, ERMERA MUNICIPALITY: 2♂♂, 24-iii-2017, Gleno, -8.7249-7358°N, 125.4227-4501°E, ca. 723-797 m a.s.l. Photos: JPL. URL (Downloaded on 17.8.2018): www.inaturalist.org/observations/7978393; www.inaturalist.org/observations/7978347.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 2♂♂, 1-ix-2018, Noro-Lata, Raca, -8.4429-35°N, 126.9669-72°E, ca. 391-399 m a.s.l., Photos: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16095393; www.inaturalist.org/observations/16095711. 1♂, 2-ix-2018, Seren-Ira, Parlamento, -8.3517°N, 126.9863°E, ca. 298 m a.s.l., Photo: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16128351. 1♂, 8-xi-2018, Muapusu, south of Com, -8.3702°N, 127.0716°E, ca. 80 m a.s.l., Photo: JPL. URL (Downloaded on 20.11.2018): www.inaturalist.org/observations/18471471.

TIMOR-LESTE, OECUSSE SAR: 1♂, 14-vii-2018, Aosnak River, E Pante Macassar, -9.1834°N, 124.4072°E, ca. 15 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14338488. 3♂♂, 21-vii-2018, Aosnak River, E Pante Macassar, -9.1840-1864°N 124.4067-4090°E, ca. 26-32 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14563019; www.inaturalist.org/observations/14563344; www.inaturalist.org/observations/14563778. 4♂♂, 4-viii-2018, Kutete, SE Pante Macassar, -9.2411-13°N 124.4273°E, ca. 689-693 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15099232; www.inaturalist.org/observations/15099231; www.inaturalist.org/observations/15099229. 1♂, 17-viii-2018, Lokpin spring, Suco Nipane, E Pante Macassar, -9.1834°N, 124.4504°E, ca. 160 m a.s.l. Photo: RMSP. URL (Downloaded on 17.8.2018): www.inaturalist.org/observations/15537811. 1♂, 22-viii-2018, Ulas spring environment, Suco Taiboco, SW Pante Macassar, -9.2702°N, 124.3118°E, ca. 274 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15776678. 1♂, 7-ix-2018, Oerupan, E Pante Macassar, -9.1775°N, 124.4394°E, ca. 84 m a.s.l., Photo: RMSP. URL (Downloaded on 9.9.2018): www.inaturalist.org/observations/16281930. 1♂ 1♀, 29-ix-2018, Oelulan, NE Oesilo, -9.3189°N, 124.4047-48°E, ca. 508 m a.s.l., Photos: RMSP. URL (Downloaded on 30.9.2018): www.inaturalist.org/observations/17019254; www.inaturalist.org/observations/17022483.

22. *Pantala flavescens* (Fabricius, 1798)

INDONESIA, EAST NUSA TENGGARA, KUPANG REGENCY: 1♂ (around 20 seen), 12-viii-2018, Ricefield E Kupang City, -10.1216°N, 123.7040°E, ca. 7 m a.s.l. Photo: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15339034.

TIMOR-LESTE, BAUCAU MUNICIPALITY: 1♀, 19-x-1973, Fatumaca, 10 km south of Baucau, ca. -8.57°N, 126.39°E, ca. 565 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, DILI MUNICIPALITY: 4♀♀, 20-xii-2018, Lake Tasitolu, W Dili, -8.5624-37°N, 125.5011-39°E, ca. 1-4 m a.s.l., Photos: JPL. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19125575; www.inaturalist.org/observations/19125587; www.inaturalist.org/observations/19125681; www.inaturalist.org/observations/19125660.

TIMOR-LESTE, OECUSSE SAR: 1♂, 21-vii-2018, Lifau environment, W Pante Macassar, -9.2016°N, 124.3073°E, ca. 5 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14565970. 1♂, 22-viii-2018, Ulas spring environment, Suco Taiboco, SW Pante Macassar, -9.2691°N, 124.3114°E, ca. 247 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15776846. 1♂ 1♀, 25-viii-2018, Kolam Xina, W Pante Macassar, -9.1994-95°N, 124.3105-07°E, ca. 5 m a.s.l. Photos: RMSP. URL (Downloaded on 25.8.2018): www.inaturalist.org/observations/15869167; www.inaturalist.org/observations/15869169.

23. *Potomarcha congener* (Rambur, 1842)

INDONESIA, EAST NUSA TENGGARA, ROTE NDAO REGENCY: 1♀, 3-viii-2018, Rote Ndao Regency, -10.8007°N, 122.9889°E, ca. 137 m a.s.l. Photo: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15068275.

TIMOR-LESTE, DILI MUNICIPALITY: 4♂♂ & 1 sex not definable, 16-x-1973, Dili, ca. -8.56°N, 125.56°E, ca. 7 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂, 1-ix-2018, Noro-Lata, Raca, -8.4441°N, 126.9660°E, ca. 388 m a.s.l., Photo: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16096404. 1♀, 1-ix-2018, Pipi-Ira, Raca, -8.4446°N, 126.9592°E, ca. 374 m a.s.l., Photo: JPL. URL (Downloaded on 3.9.2018): www.inaturalist.org/observations/16096952. 1♂ 2♀♀, 3-xi-2018, Kamin Kuru, Com, -8.3564-3686°N, 127.0452-0532°E, ca. 112-236 m a.s.l., Photos: JPL. URL (Downloaded on 04.11.2018): www.inaturalist.org/observations/18056832; www.inaturalist.org/observations/18056786; www.inaturalist.org/observations/18056219.

24. *Rhyothemis phyllis* (Sulzer, 1776)

INDONESIA, EAST NUSA TENGGARA, ROTE NDAO REGENCY: 1♀, 24-vii-2018, Danau Tua, -10.8539°N, 122.9222°E, ca. 74 m a.s.l. Photo: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14710767.

25. *Tholymis tillarga* (Fabricius, 1798)

TIMOR-LESTE, DILI MUNICIPALITY: 1♂, 22-xi-2018, Rua da Minha, Ai-Tarak-Laran, Dili, -8.5498°N, 125.5646°E, ca. 4 m a.s.l. Photo: JPL. URL (Downloaded on 22.11.2018): www.inaturalist.org/observations/18555640. 1♂, 23-xi-2018, Maloa, Dili, -8.5582°N, 125.5646°E, ca. 7 m a.s.l. Photo: JPL. URL (Downloaded on 24.11.2018): www.inaturalist.org/observations/18592794.

TIMOR-LESTE, OECUSSE SAR: 1♂, 18-ix-2018, Aosnak River, E Pante Macassar, -9.1839°N, 124.4063°E, ca. 27 m a.s.l. Photo: RMSP. URL (Downloaded on 18.9.2018): www.inaturalist.org/observations/16654002. 1♀, 22-ix-2018, Aosnak River, E Pante Macassar, -9.1833°N, 124.4075°E, ca. 14 m a.s.l. Photo: RMSP. URL (Downloaded on 22.9.2018): www.inaturalist.org/observations/16765267. 1♀, 7-xi-2018, Aosnak River, E Pante Macassar, -9.1839°N, 124.4064°E, ca. 25 m a.s.l. Photo: RMSP. URL (Downloaded on 7.11.2018): www.inaturalist.org/observations/18207676.

26. *Tramea stenoloba* (Watson, 1962)

INDONESIA, EAST NUSA TENGGARA, SOUTH CENTRAL TIMOR REGENCY: 2♂♂, iv-2016, Kolon village environment, Mount Mutis area, ca. -9.5886°N, 124.2081°E, ca. 1290 m a.s.l., MWNH.

INDONESIA, EAST NUSA TENGGARA, KUPANG REGENCY: 2♂♂, 26-xii-2018, Oesapa fishponds, Kupang, -10.1470°N, 123.6362°E, ca. 6 m a.s.l. Photos: CRT. URL (Downloaded on 27.12.2018): www.inaturalist.org/observations/19224399; www.inaturalist.org/observations/19224416.

TIMOR-LESTE, DILI MUNICIPALITY: 1♂, 12-xii-2017, Lake Tasitolu, W Dili, -8.5649°N, 125.5050°E, ca. 1 m a.s.l. Photo: CRT. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/9160886. 1♂ 1♀, 20-xii-2018, Lake Tasitolu, W Dili, -8.5635°N, 125.5042°E, ca. 0 m a.s.l., Photo: JPL. URL (Downloaded on 21.12.2018): www.inaturalist.org/observations/19125039.

TIMOR-LESTE, OECUSSE SAR: 1♂, 14-vii-2018, Aosnak River, E Pante Macassar, -9.1843°N, 124.4097°E, ca. 15 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/14338443. 2♂♂, 5-viii-2018, SW Pante Macassar, -9.2179-80°N, 124.3299-3300°E, ca. 18 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15131503; www.inaturalist.org/observations/15126115.

27. *Trithemis festiva* (Rambur, 1842)

TIMOR-LESTE, BAUCAU MUNICIPALITY: 2♂♂, 19-x-1973, Fatumaca, 10 km south of Baucau, ca. -8.57°N, 126.39°E, ca. 565 m a.s.l., Tom Weir leg., MAGNT.

TIMOR-LESTE, LAUTEM MUNICIPALITY: 1♂, 24-iii-2017, Vailovaia, Com, -8.3629°N, 127.0513°E, ca. 134 m a.s.l. Photo: JPL. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/8023067. 1♂, 12-xi-2018, Sari, Com, -8.3601°N, 127.0479°E, ca. 124 m a.s.l., Photo: JPL. URL (Downloaded on 12.11.2018): www.inaturalist.org/observations/18350945.

TIMOR-LESTE, OECUSSE SAR: 1♂, 4-viii-2018, Kutete, SE Pante Macassar, -9.2413°N, 124.4273°E, ca. 689 m a.s.l. Photo: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15099200. 2♂♂, 22-viii-2018, Ulas spring environment, Suco Taiboco, SW Pante Macassar, -9.2701°N, 124.3114-16°E, ca. 270-272 m a.s.l. Photos: RMSP. URL (Downloaded on 23.8.2018): www.inaturalist.org/observations/15776681; www.inaturalist.org/observations/15776679. 1♂, 29-ix-2018, Oelulan, NE Oesilo, -9.3170°N, 124.4032°E, ca. 472 m a.s.l., Photo: RMSP. URL (Downloaded on 30.9.2018): www.inaturalist.org/observations/17019683.

28. *Trithemis lilacina* Förster, 1899

TIMOR-LESTE, AILEU MUNICIPALITY: 6♂♂, 5-xii-2018, Be Tuda Berloi Waterfall, -8.6452-53°N, 125.5250-52°E, ca. 536-545 m a.s.l., Photos: JPL. URL (Downloaded on 13.12.2018): www.inaturalist.org/observations/18916069; www.inaturalist.org/observations/18912737; www.inaturalist.org/observations/18955364; www.inaturalist.org/observations/18956101; www.inaturalist.org/observations/18955990; www.inaturalist.org/observations/18955947.

TIMOR-LESTE, DILI MUNICIPALITY: 2♂♂, 4-x-2018, Tuda Tiris Waterfall, south of Dili, -8.6175°N, 125.5565°E, ca. 496 m a.s.l., Photos: JPL. URL (Downloaded on 8.10.2018): www.inaturalist.org/observations/17209859; www.inaturalist.org/observations/17209937.

Appendix 2: Distribution maps

Explanation to the maps:

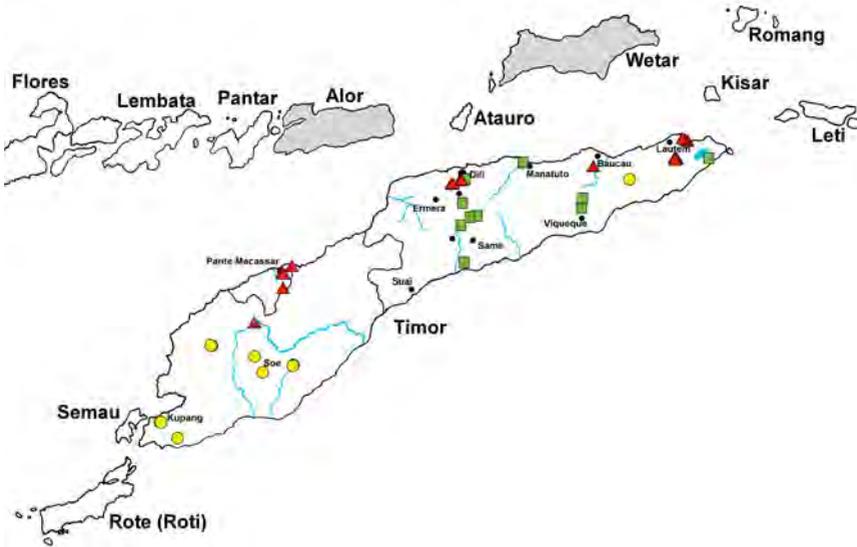
Red triangle – records published in this paper.

Green square – records since 2003 published by Polhemus & Helgen 2004, Seehausen 2017a, b and Seehausen & Theischinger 2017.

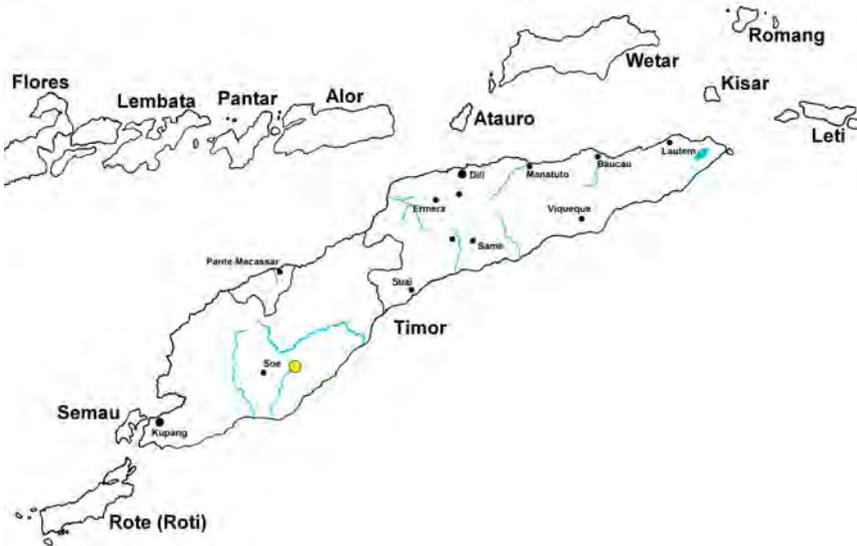
Yellow circles and oval – historical records published by Hagen (1863, 1869), Asahina (1990), Lieftinck (1931, 1933, 1936, 1953), Ris (1913a, b, 1916), Seehausen (2017a, b) and Seehausen & Theischinger (2017).

Shaded grey – further range basing on Lieftinck (1936, 1953).

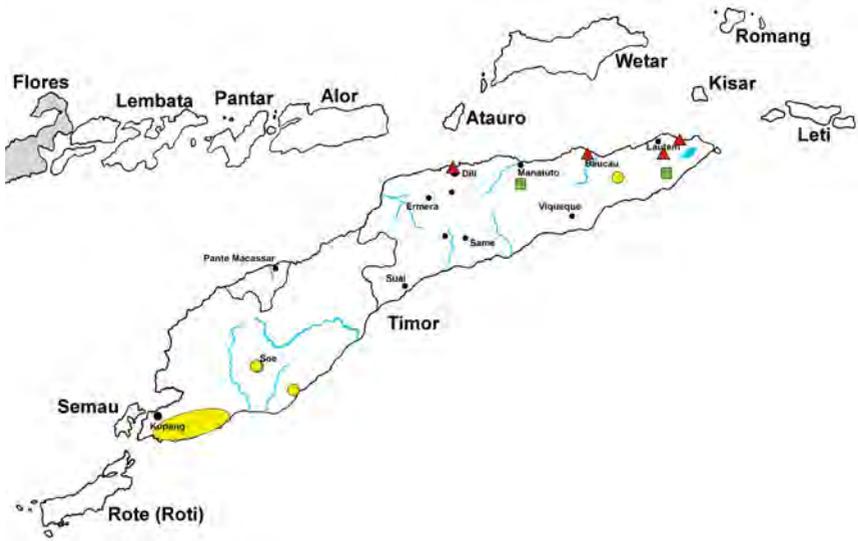
Question mark – unspecified historical records published by Ris (1909a, 1912) and Lieftinck (1953).



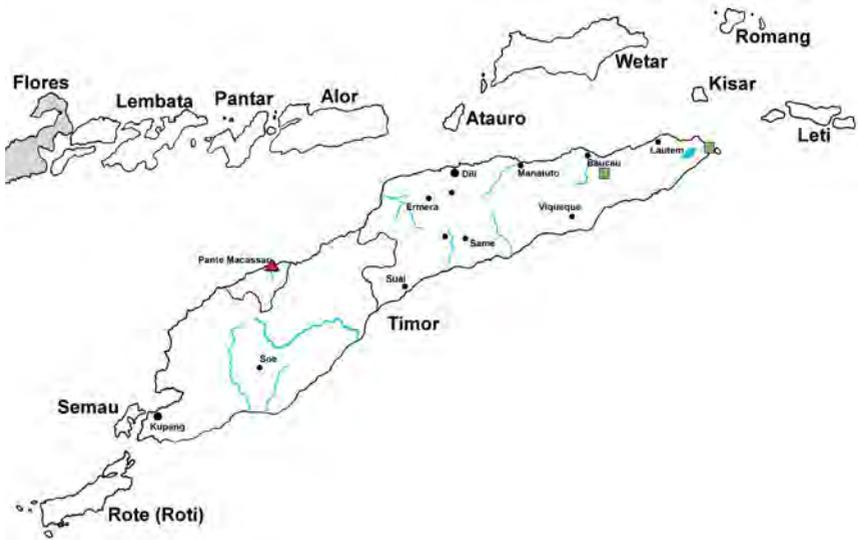
Map 1: *Rhinocypha pagenstecheri timorana* Liefjinck, 1936



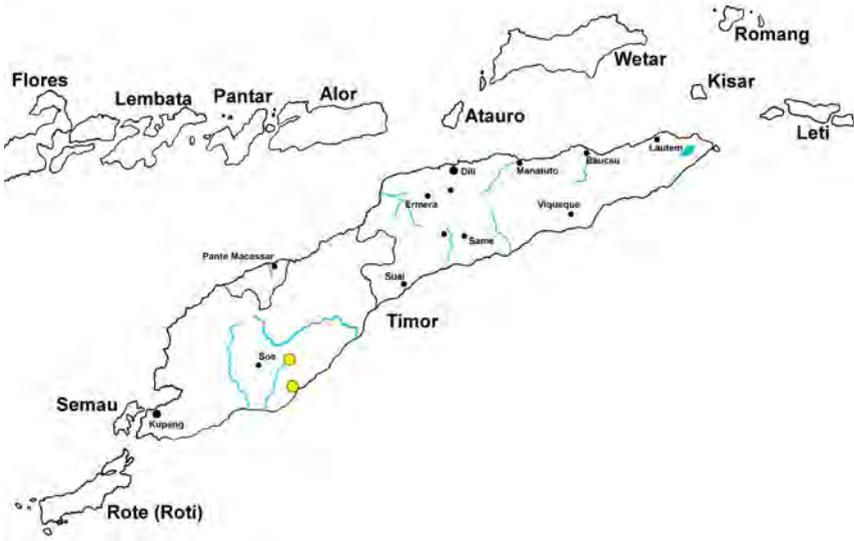
Map 2: *Indolestes lafaeci* Seehausen, 2017



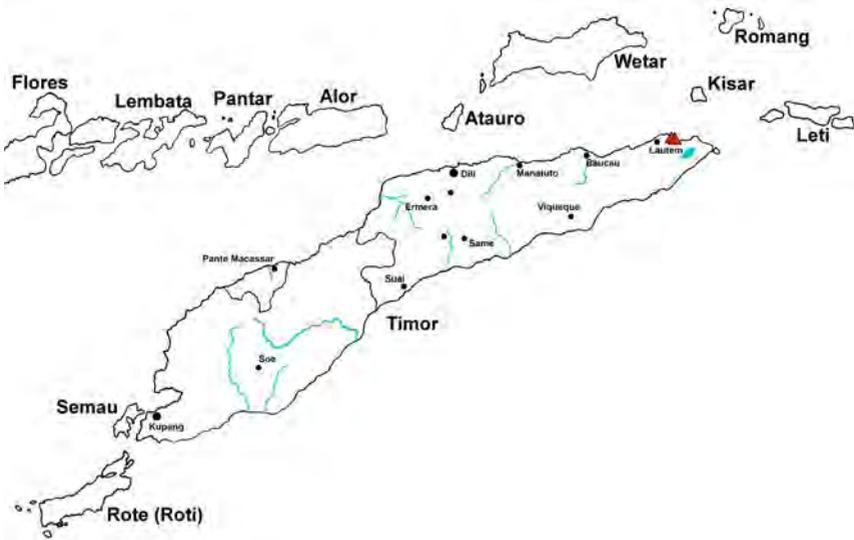
Map 3: *Agriocnemis femina* (Brauer, 1868)



Map 4: *Agriocnemis pygmaea* (Rambur, 1842)



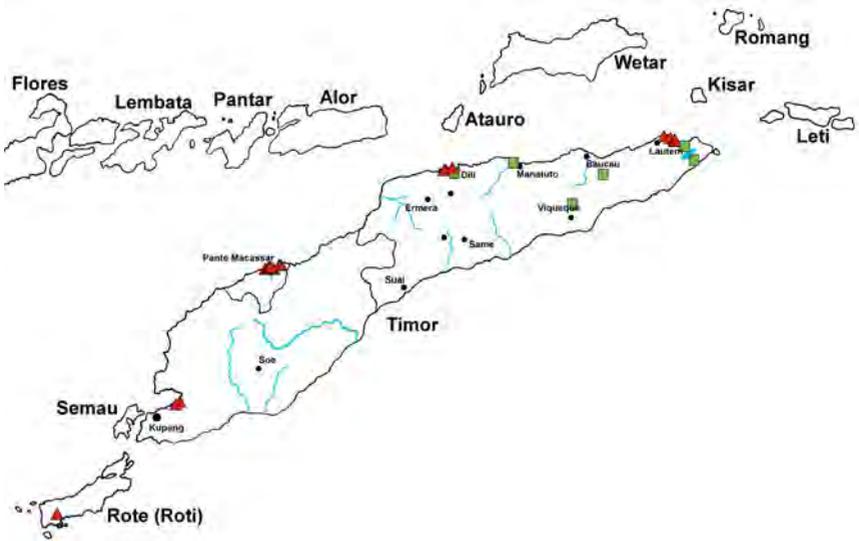
Map 5: *Austroallagma sagittiferum* (Liefinck, 1949)



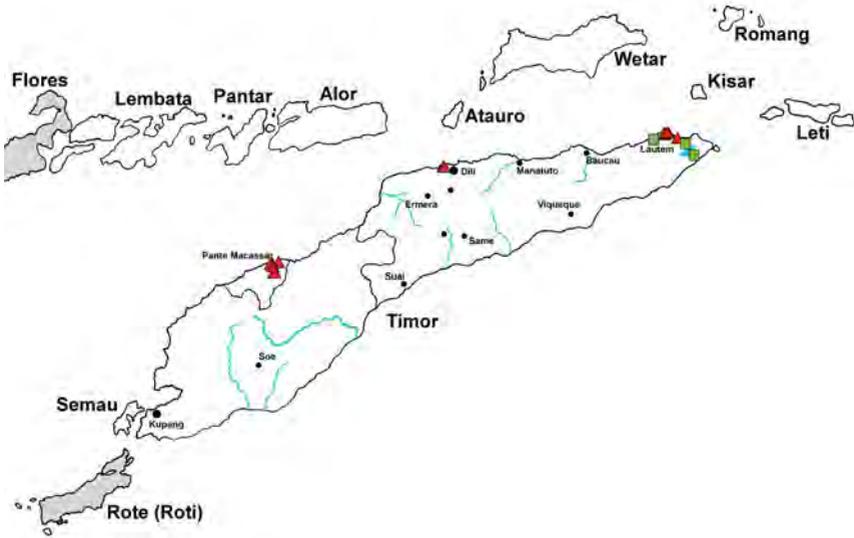
Map 6: *Ischnura aurora* (Brauer, 1865)



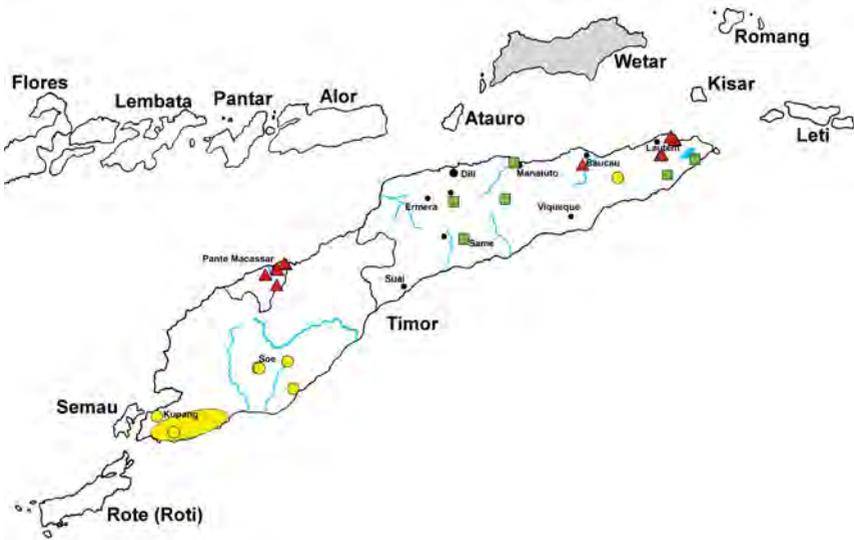
Map 7: *Ischnura heterosticta* (Burmeister, 1839)



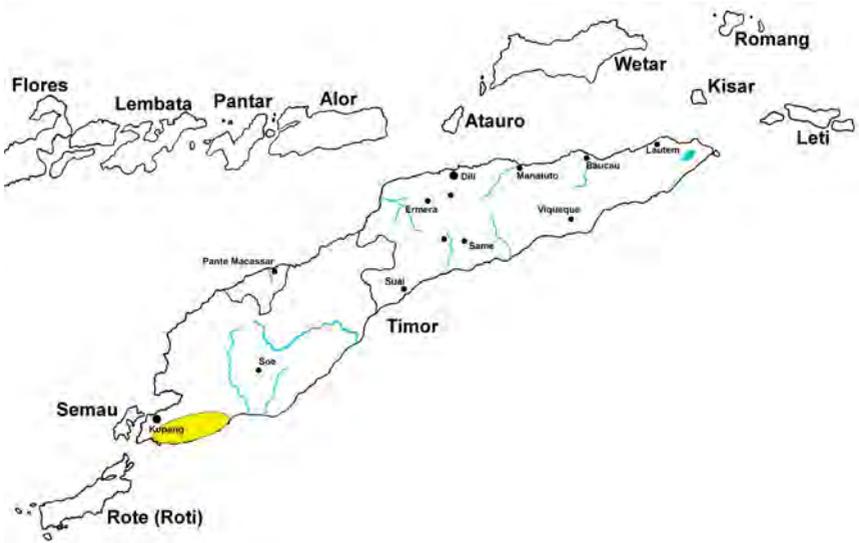
Map 8: *Ischnura senegalensis* (Rambur, 1842)



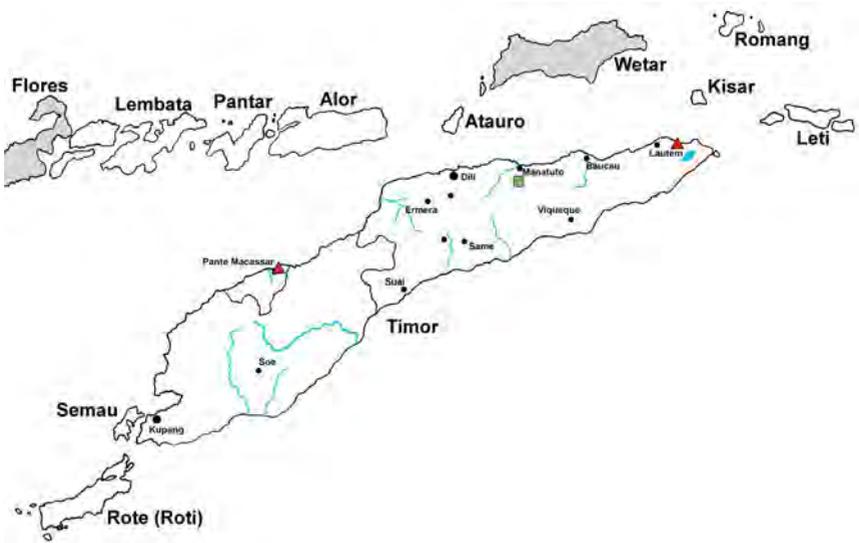
Map 9: *Pseudagrion microcephalum* (Rambur, 1842)



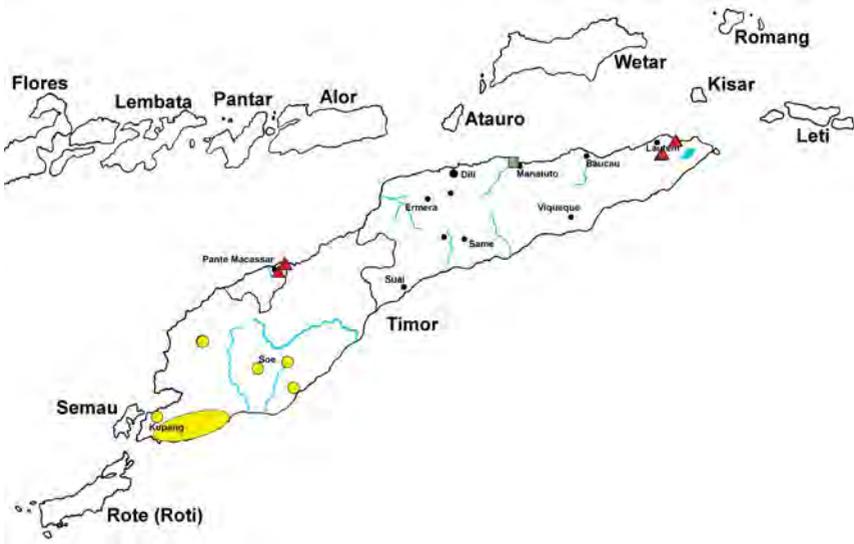
Map 10: *Pseudagrion pilidorsum deflexum* Lieffinck, 1936



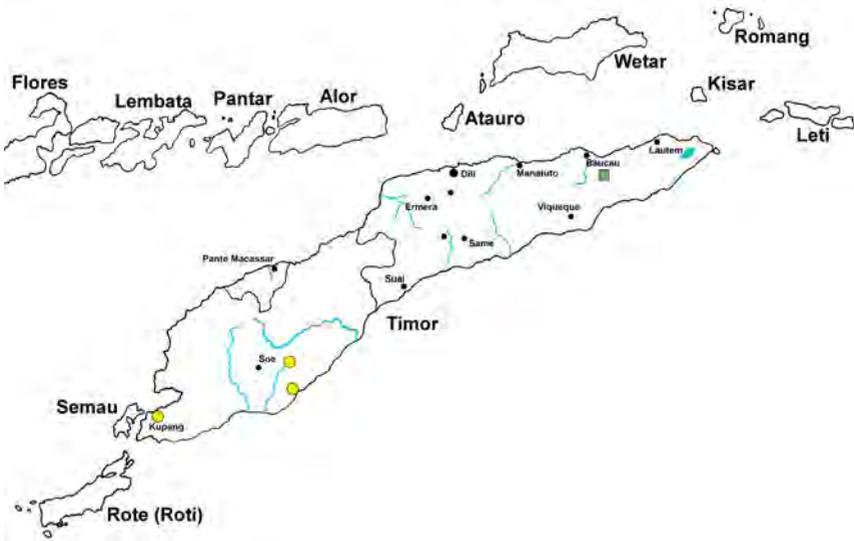
Map 11: *Pseudagrion schmidianum* Liefinck, 1936



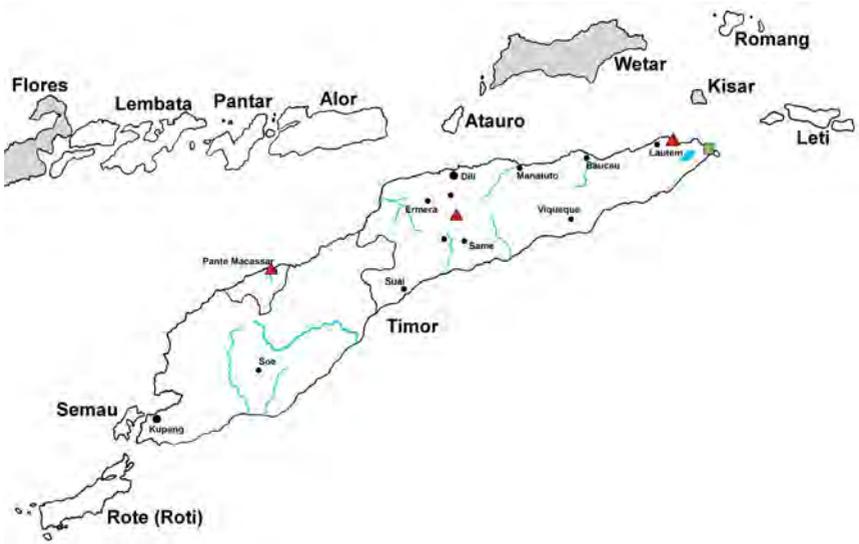
Map 12: *Xiphiagrion cyanomelas* Selys, 1876



Map 13: *Nososticta impercepta* Seehausen & Theischinger, 2017



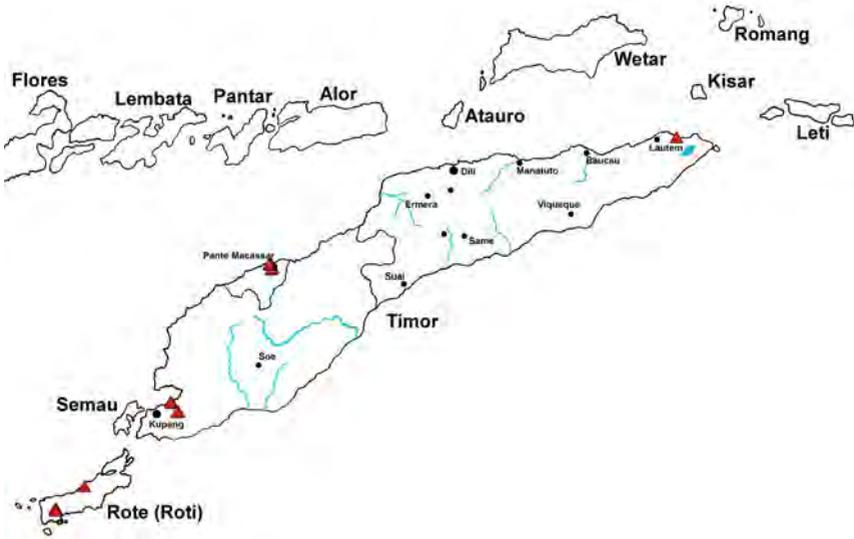
Map 14: *Anax georgius* Selys, 1872



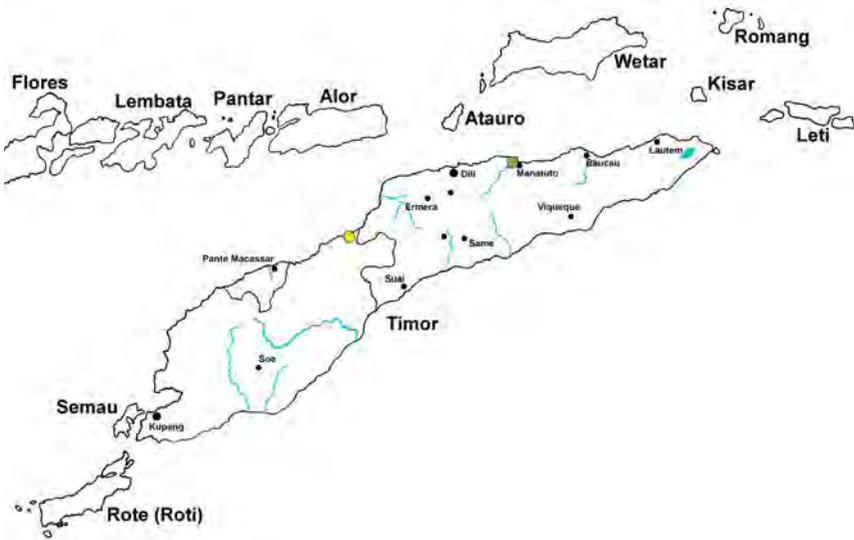
Map 15: *Anax guttatus* (Burmeister, 1839)



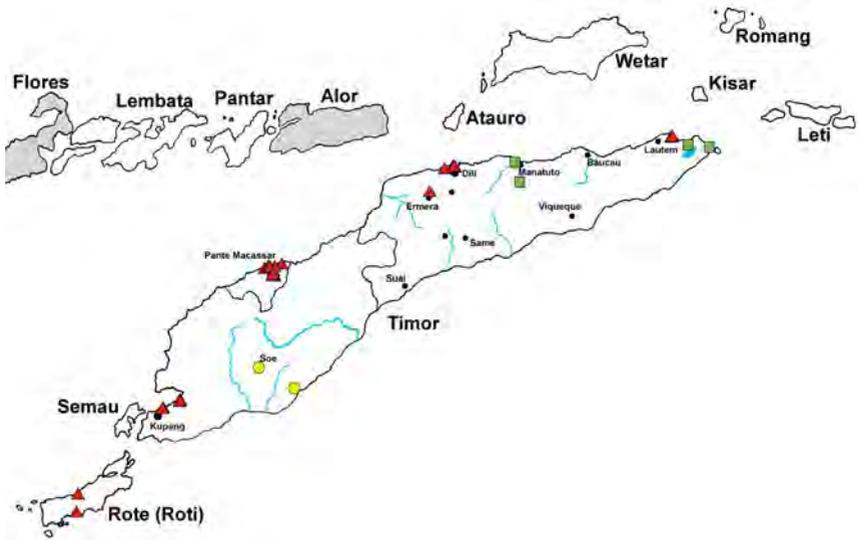
Map 16: *Gynacantha* sp. cf. *dobsoni* Fraser, 1951



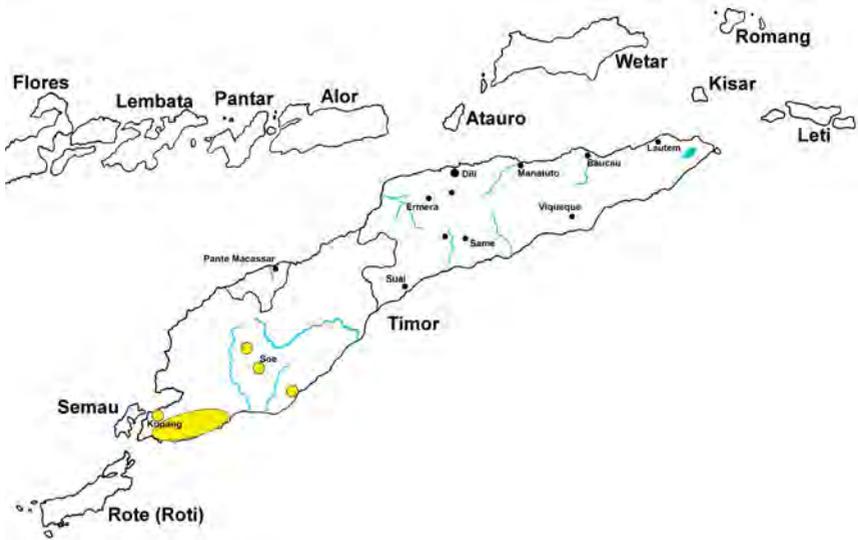
Map 17: *Brachythemis contaminata* (Fabricius, 1793)



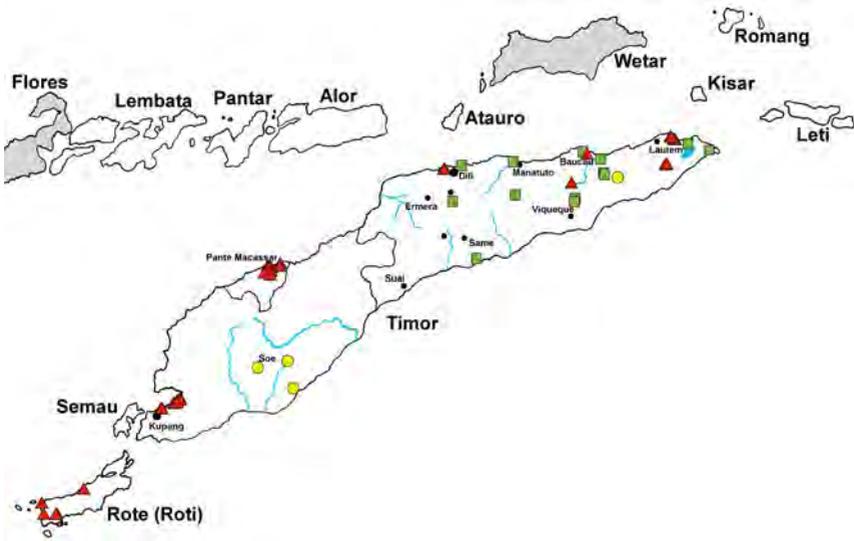
Map 18: *Camacina gigantea* (Brauer, 1867)



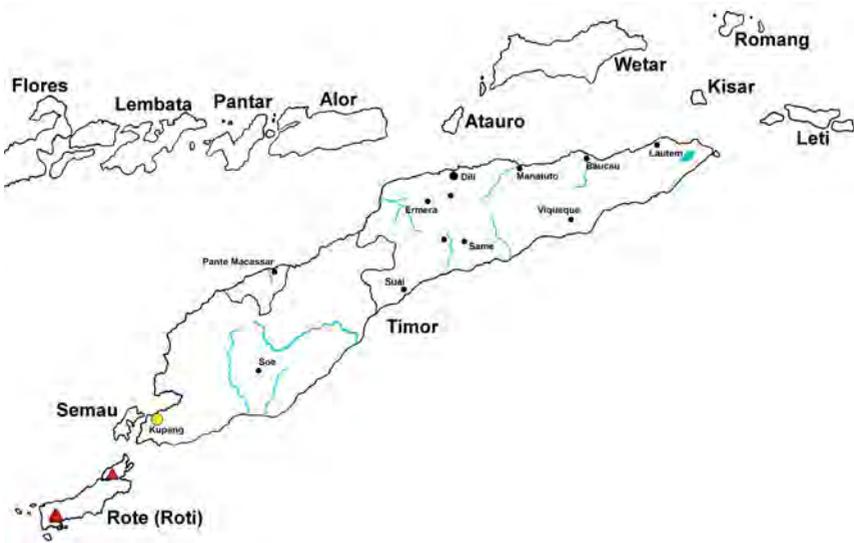
Map 19: *Crocothemis servilia* (Drury, 1773)



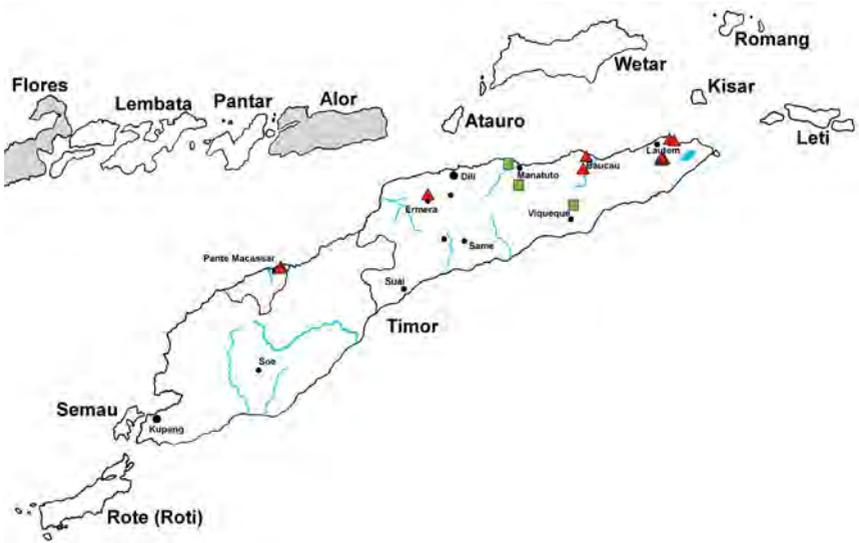
Map 20: *Diplacodes haematodes* (Burmeister, 1839)



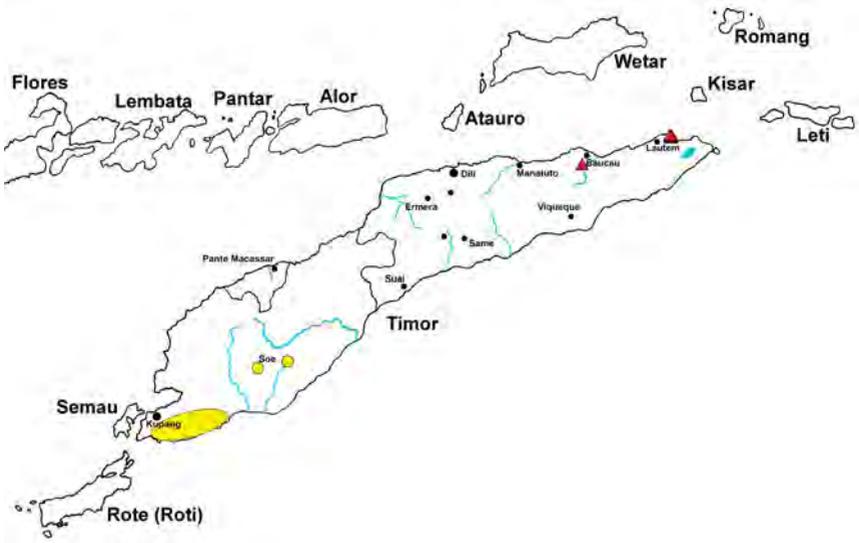
Map 21: *Diplacodes trivialis* (Rambur, 1842)



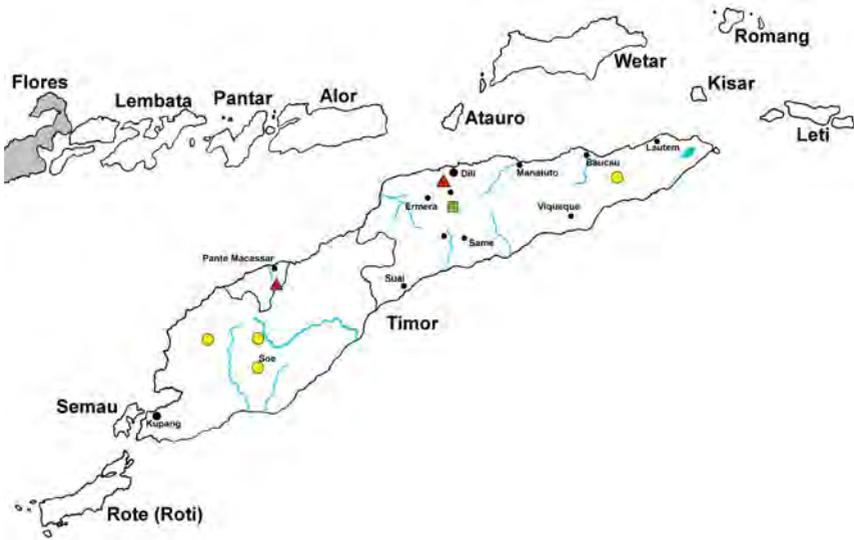
Map 22: *Macrodiplax cora* (Brauer, 1867)



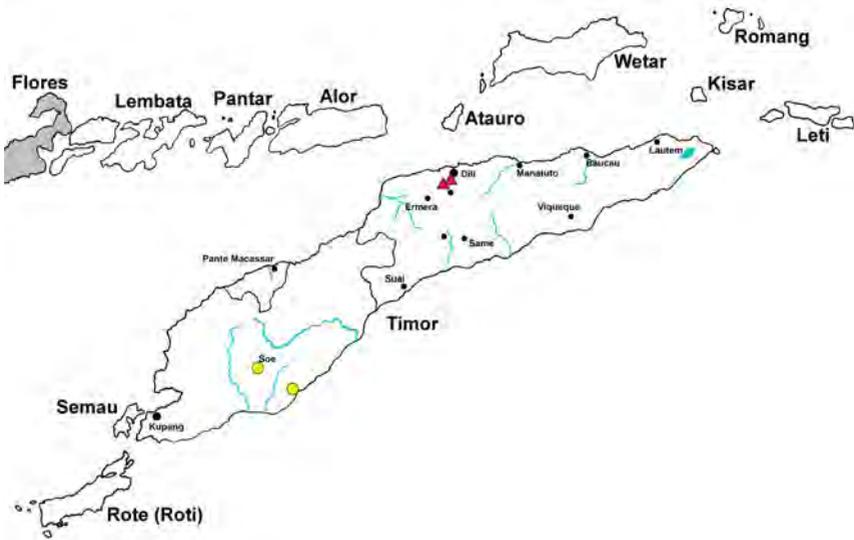
Map 23: *Neurothemis ramburii* (Brauer, 1866)



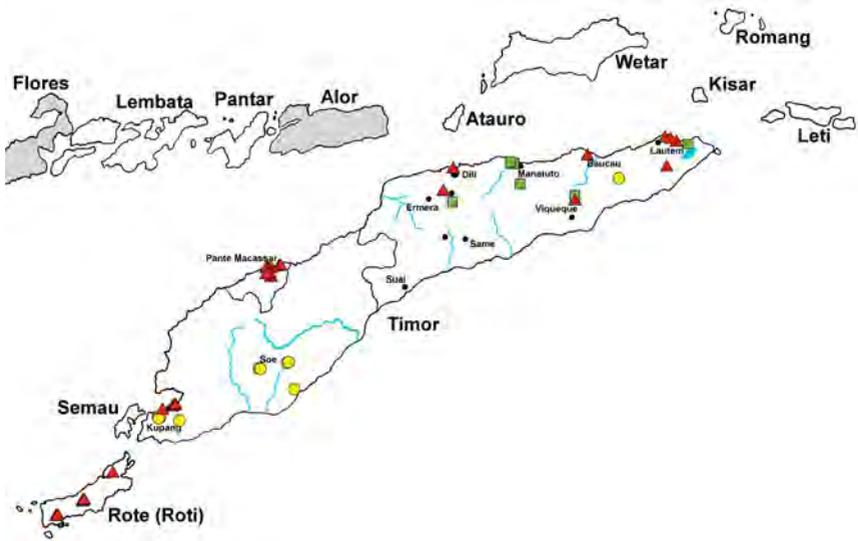
Map 24: *Orthetrum caledonicum* (Brauer, 1865)



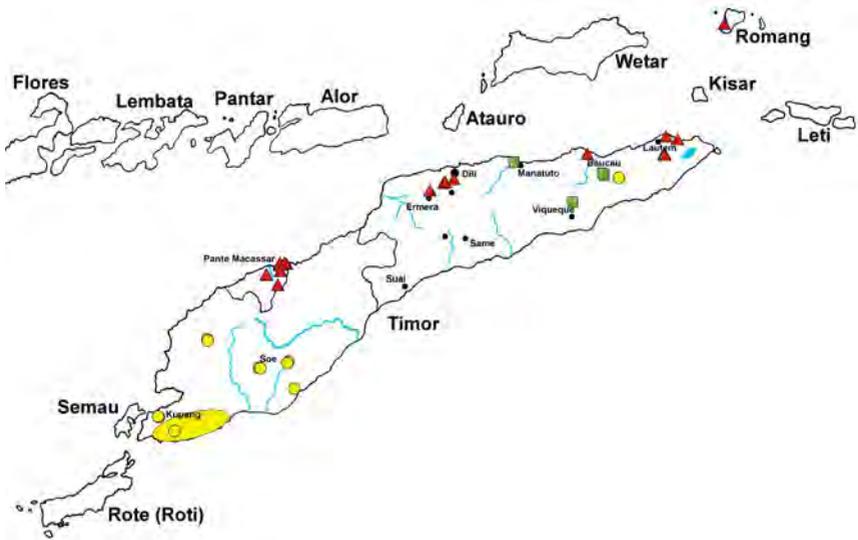
Map 25: *Orthertrum glaucum* (Brauer, 1865)



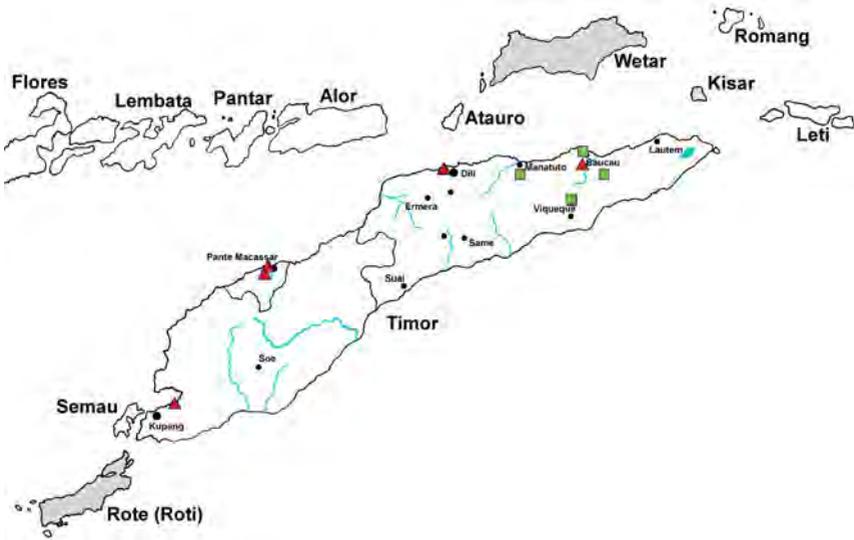
Map 26: *Orthertrum pruinoseum schneideri* Förster, 1903



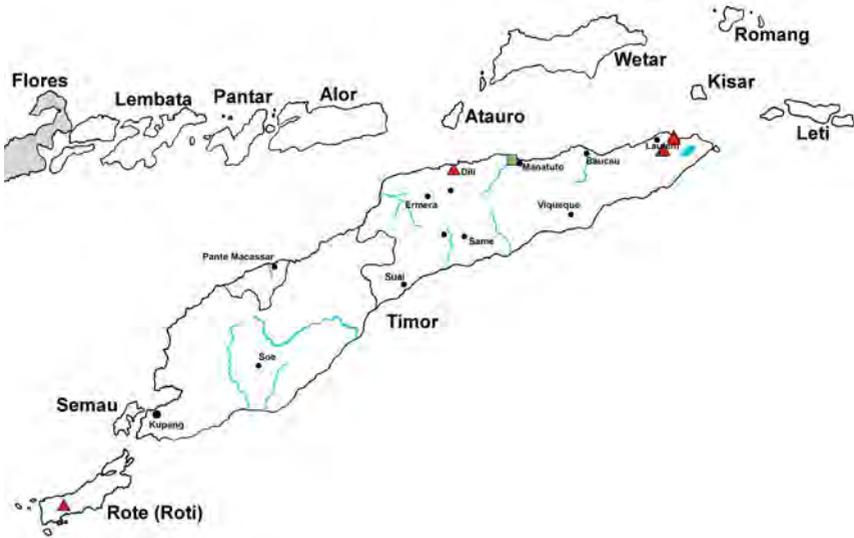
Map 27: *Orthetrum sabina* (Drury, 1773)



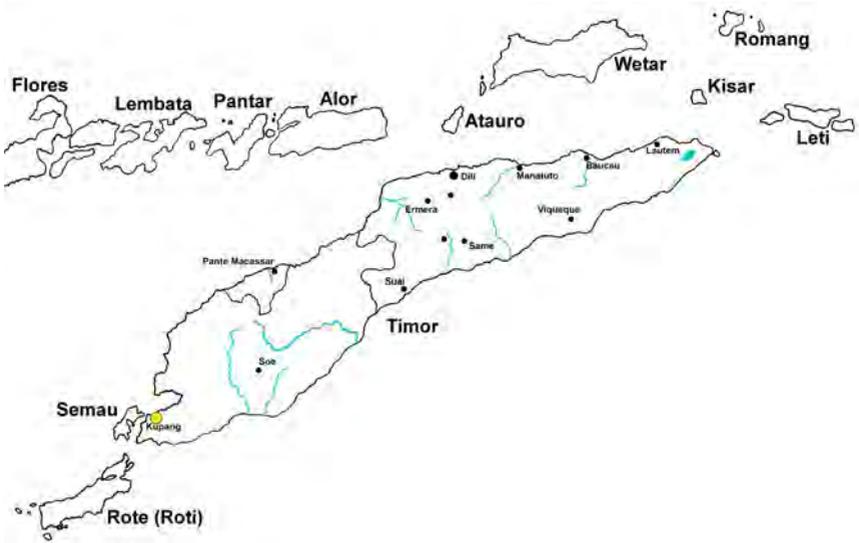
Map 28: *Orthetrum testaceum* (Burmeister, 1839)



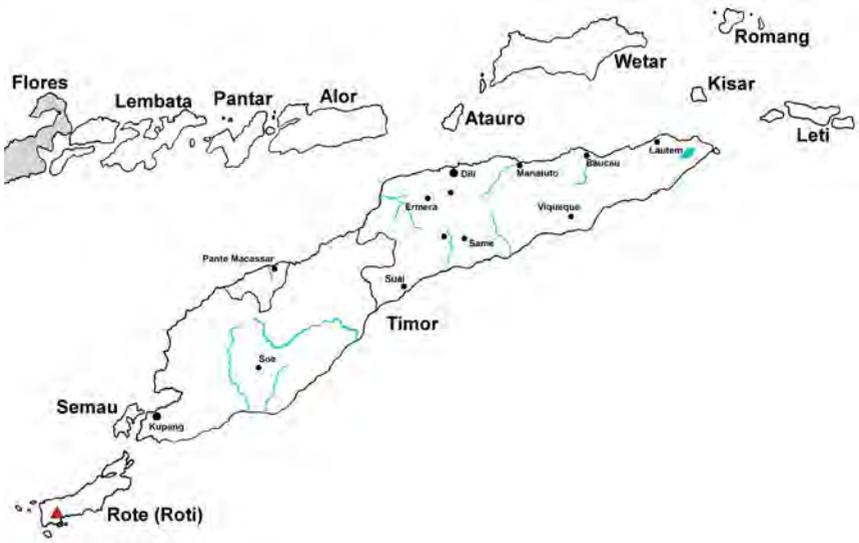
Map 29: *Pantala flavescens* (Fabricius, 1798)



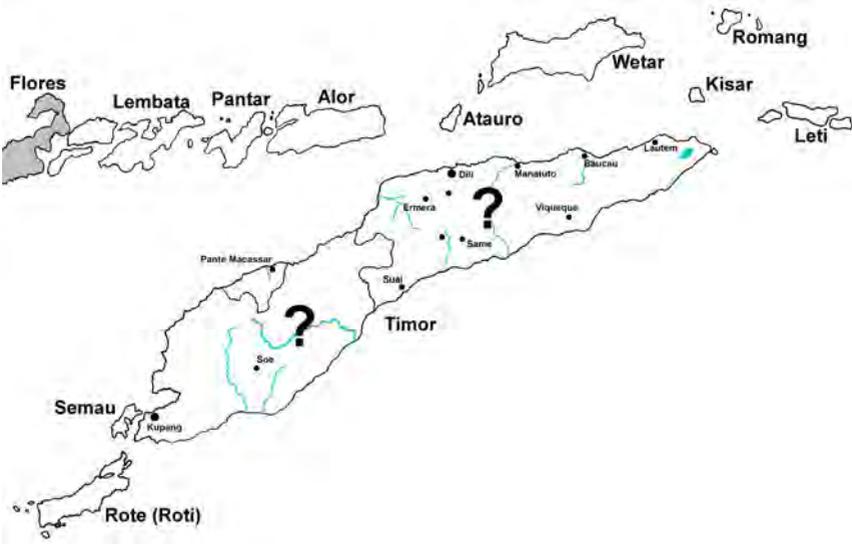
Map 30: *Potomarcha congener* (Rambur, 1842)



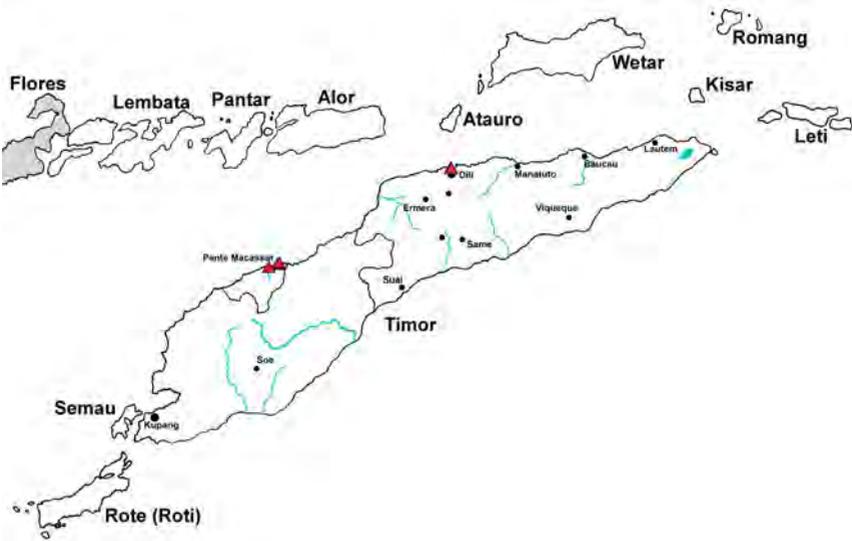
Map 31: *Rhyothemis graphiptera* (Rambur, 1842)



Map 32: *Rhyothemis phyllis* (Sulzer, 1776)



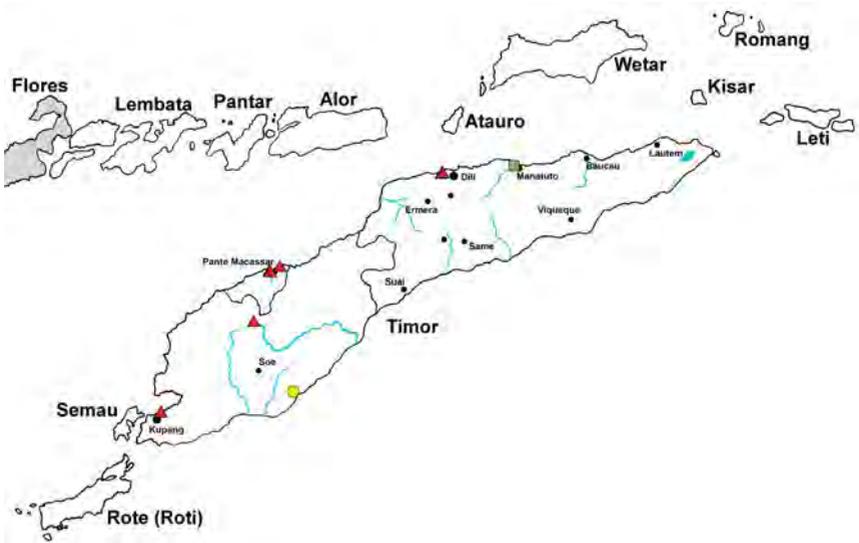
Map 33: *Tetrathemis irregularis hyalina* Kirby, 1889



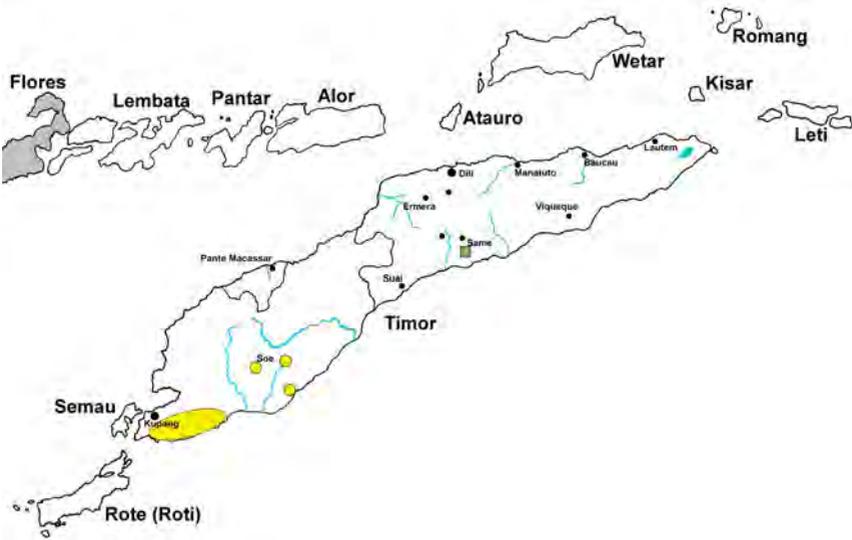
Map 34: *Tholymis tillarga* (Fabricius, 1798)



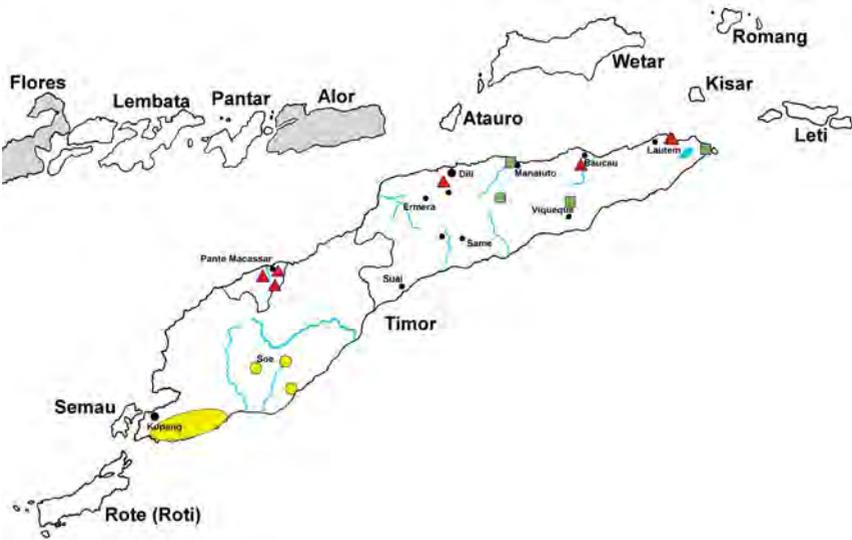
Map 35: *Tramea loewii* (Brauer, 1866)



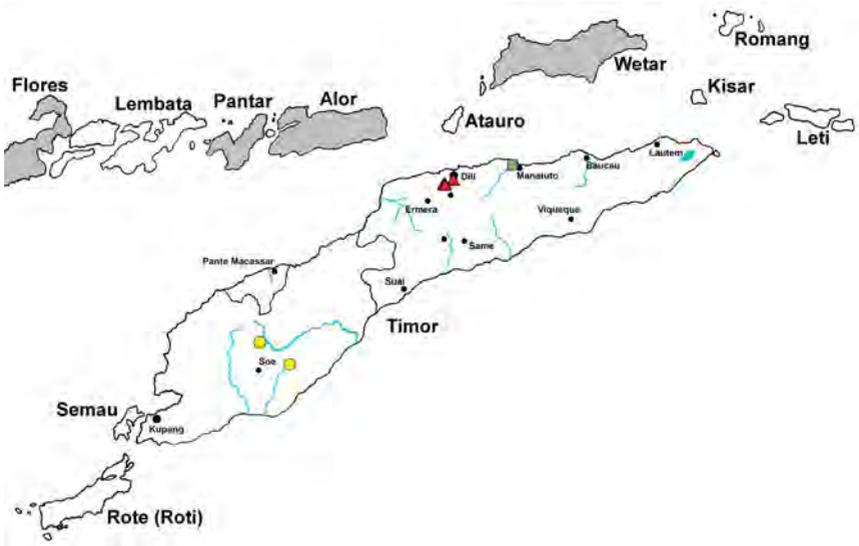
Map 36: *Tramea stenoloba* (Watson, 1962)



Map 37: *Trithemis aurora* (Brauer, 1865)



Map 38: *Trithemis festiva* (Rambur, 1842)



Map 39: *Trithemis lilacina* Förster, 1899



Map 40: *Zygonyx ida* Selys, 1869

Appendix 3

Seasonal distribution of each species from Timor and Rote Island as far as it is reported to date. Shaded yellow = dry season from May to October. Brackets indicate imprecise data, e.g. "iv to v-1929" as it is sometimes given by the collectors Le Moutt and Ed. Handschin. In some historical records not even a month is available thus it left blank.

Species	1	2	3	4	5	6	7	8	9	10	11	12
<i>Rhinocypha pagenstecheri timorana</i>	X		X	X	X	X		X	X	X	X	X
<i>Indolestes lafaeci</i>						X						
<i>Nososticta impercepta</i>	X			(X)	X	X		X	X		X	X
<i>Agriocnemis femina</i>	X			(X)	X	X			X	X	X	X
<i>Agriocnemis pygmaea</i>					X	X						X
<i>Austroallagma sagittiferum</i>				(X)	X	X						
<i>Ischnura aurora</i>											X	
<i>Ischnura heterosticta</i>				(X)	X							
<i>Ischnura senegalensis</i>				X	X	X	X	X	X		X	X
<i>Pseudagrion microcephalum</i>					X		X	X	X	X	X	X
<i>Pseudagrion plildorsum deflexum</i>	X		X	X	X	X	X	X	X	X	X	X
<i>Pseudagrion schmidtianum</i>	X											X
<i>Xiphagrion cyanomelas</i>						X	X					X
<i>Anax georgius</i>				(X)	X	X						X
<i>Anax gulfatus</i>				X	X	X				X		
<i>Gynacantha dobsoni</i>									X			
<i>Brachythemis contaminata</i>							X	X	X	X	X	X
<i>Camacina gigantea</i>						X	X					
<i>Cracothemis servilla</i>				(X)	X	X	X	X	X	X	X	X
<i>Diplacodes haematodes</i>	X			(X)	X	X			X			X
<i>Diplacodes trivialis</i>				X	X	X	X	X	X	X	X	X
<i>Macradiplax cora</i>					X		X	X				X
<i>Neurothemis ramburii</i>			X		X	X	X		X	X	X	
<i>Orthetrum caledonicum</i>	X		X			X	X			X	X	X
<i>Orthetrum glaucum</i>						X		X	X			X
<i>Orthetrum pruinosum schneideri</i>				(X)	X	X				X		X
<i>Orthetrum sabina</i>	X			(X)	X	X	X	X	X	X	X	X
<i>Orthetrum testaceum</i>	X		X	X	X	X	X	X	X	X		X
<i>Pantala flavescens</i>					X	X	X	X	X	X		X
<i>Potamarcha congener</i>						X		X	X	X		X
<i>Rhyothemis graphiptera</i>												X
<i>Rhyothemis phyllis</i>							X					
<i>Tetrathemis irregularis hyalina</i>												
<i>Tholymis tillarga</i>									X		X	X
<i>Tramea loewii</i>												
<i>Tramea stenoloba</i>				X	X	X	X	X				X
<i>Trilthemis aurora</i>	X			(X)	X	X						X
<i>Trilthemis festiva</i>			X	(X)	X	X	X		X	X	X	X
<i>Trilthemis lilacina</i>			X			X		X		X		X
<i>Zygonyx ida</i>												
<i>Zyxomma obtusum</i>					X							

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