A note on the genus *Tanaecia* Butler, 1869 (Lepidoptera, Nymphalidae, Adoliadini), distributed in South East Asia (Part 1)

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**ABSTRACT** — The genus *Tanaecia* Butler, 1869, widely distributed in Southeastern Asia, has been classified into the tribe Adoliadini (Limenitidinae, Nymphalidae). In this paper, *Tanaecia clathrata* and the related species are discussed. The following sixteen taxa described before are mentioned: *caerulescens*, *clathrata*, *coelebs*, *ellida*, *heringi*, *lautensis*, *mulsia*, *nicevillei*, *purpurea*, *regalis*, *regina*, *siluvana*, *sirius*, *subclathrata*, and *violaria*. The characteristics of their type specimens are examined and they are classified into four species: *Tanaecia clathrata*, *T. heringi*, *T. mulsia*, and *T. nisakai* sp. nov. A new species, *T. nisakai*, and two new subspecies, i.e. *T. heringi sriwijaya* and *T. heringi riauensis*, are described.

**KEY WORDS**: Lepidoptera, Nymphalidae, Adoliadini, *Tanaecia*, *caerulescens*, *clathrata*, *coelebs*, *ellida*, *heringi*, *lautensis*, *mulsia*, *nicevillei*, *nisakai* sp. nov., *purpurea*, *regalis*, *regina*, *riauensis* ssp. nov., *siluvana*, *sirius*, *solum*, *subclathrata*, *sriwijaya* ssp. nov., *violaria*.

**INTRODUCTION**

The genus *Tanaecia* Butler, 1869, widely distributed in Southeastern Asia, has been classified into the tribe Adoliadini (Limenitidinae, Nymphalidae), the larvae of which bears many long, delicate and lateral projections along the subdorsal line (“Chilopodomorphous larva”). The genus *Tanaecia* is designated here as “true” *Tanaecia*, the type-species of which is *Adolias pulasara* Moore, [1858], and more than 140 taxa has been described. Some authors included the genus *Cynitia* Snellen, 1895, the type-species of which is *Felderia phegeothon* Semper, 1888 in the genus *Tanaecia*, however, they are treated as different ones each other here following Tsukada (1991). The higher category classification of the tribe Adoliadini will be discussed in the following papers.

Tsukada (1991) summarized the genus *Tanaecia* with 17 species. New information of the genus has been procured during this quarter of century and a new revision is needed. The “Notes” of them will be published in accordance with the “related” species separately and finally the revision of the whole genus will be made based on each note. The “related” species here designated are grouped by their external morphology like wing patterns and not by internal characteristics of their genitalia. In this paper *Tanaecia clathrata* (Snellen van Volchenhoven, 1862) and the related species *T. heringi* Nepelet, 1935 (cited as *T. coelebs* Corbet, 1941; Tsukada, 1991) are discussed first.

**ABBREVIATION**


**GENERAL CHARACTERISTICS OF WING PATTERNS SHARED BY T. CLATHRATA AND T. HERINGI**

The so called “Euthalia wing pattern”, common among the species of the genus *Euthalia*, is present on the underside of hind wing. In males, the ground colour of fore wing upperside is uniformly black-brown and has a blue band from the middle of distal margin to tornus. On hindwing upperside has a distinct broad area present at the distal region; the ground colour of the underside is tinged with purple.

Some other species, e.g., in *T. munda* (Fruhstorfer, 1899), have the form with similar blue distal area on the hind wing.
underside not tinged with purple, and the stout wing shape.

On the contrary, the females are very similar to each other, and no distinct features are found to distinguish both of the species from the other species of the genus Tanaecia. Sukada (1991) only stated “the basal part of white band on the hind wing is not acute and moderate” and no other detailed distinctions were presented. The brown ground colour and each form of white and black markings are very similar among the genus Tanaecia, and it is very difficult to distinguish them from each other.

Tanaecia julii (Lesson, 1837) also shows a blue area on the marginal region of the male hind wing upperside, but the ground colour of the hind wing underside is yellowish and not tinged with purple, so it is easy to distinguish julii from them.

**DESCRIBED TAXA**

The sixteen taxa related to T. clathrata and T. heringi are described as follows. All type material except for nicevillei were examined.

tanyvalecia


This species was described by Grose-Smith (1889) based on the specimens from Kina-Baru, Sabah, Malaysia. The holotype was not designated and one ♂ specimen (probably syntype) (Fig. 2) is housed in BMNH. On the spelling of specific name of this species two spellings have been cited, i. e., *caeruleascens* and *coeruleascens*. The spelling of the original description is “Tangcia caeruleascens” and “Tanaecia” has been used in general, so it might be correct to use “caeruleascens”.

clothrata


Adolias clathrata was described based on one ♂ from “Borneo” by Snellen van Vollenhoven in 1862. The locality was not indicated in detail. The holotype specimen (Fig. 1) is deposited in RMNH.

coelebs


Tanaecia coelebs was described based on one ♂ by Corbet in 1941. The type locality is Btg. Proepoe, Padang Bovenland in western Sumatra, Indonesia. The holotype (Fig. 32) is deposited in BMNH. The name coelebs is not available (see heringi section).

elida

Euthalia ellida Staudinger, 1896: 237, pl. 5, fig. 2 ♂. Holotype ♂, Malaysia: Sarawak (ZMHU).

This species was described by Staudinger (1896) based on a ♂ specimen from Sarawak, Borneo. The holotype (Fig. 3) is deposited in ZMHU.

heringi


Niepelt (1935) described *Tanaecia heringi* based on a ♂ specimen from Padang, Bovenland, western Sumatra, Indonesia and the holotype (Fig. 31) is deposited in ZMHU. In 2002 ICZN decided that the name coelebs Corbet, 1941 is not available and heringi Niepelt, 1935 is the replacement name for it (Case 3076).

lautensis


Tsukada (1991) described lautensis as a subspecies of Tanaecia clathrata based on a ♂ specimen from Laut Is., southeastern Borneo, Indonesia. The holotype (Fig. 63) is deposited in KMNH.

mulsas


Tanaecia coelebs mulsas was described by Tsukada (1991) from Belitung Is., Indonesia based on 3♂1♀type series, but the holotype ♂ has been untraced. The paratypes 1♂1♀ (Figs. 53, 57) are in author’s collection. In the original description the subspecific epithet was *mulsas* (masculine), however, the generic name *Tanaecia* is feminine and the ending is changed to *mulsas* to agree in gender with the generic name (Art. 31.2) (the following *silvana* is the same case).

nicevillei

Tanaecia nicevillei Distant, 1884: 199. Syntype(s) ♂, Malaysia: Perak (ZSI, Kolkata), [not examined].

This species was described by Distant (1884) based on the specimens from Perak, Malaysia. The ZSI holds the type series, but I have not examined them. In this paper the specimen labeled “nicevillei” in BMNH (Fig. 22) was examined, which was collected at Perak in 1895.

purpurea


Fruhstorfer (1913) described it as the form of T. clathrata coerulescens based on a ♂ specimen from Lawas, Sabah, Malaysia. The holotype (Fig. 64) is deposited in MNHN.

regalis

Tanaecia coelebs regalis Tsukada, 1991: 333, pl. 38, figs. 1, 2 ♂. Holotype ♂, Malaysia: Cameron Highlands (ET).

Tsukada (1991) described it as a subspecies of T. coelebs based on 3♂ from Cameron Highland, Malaysia. The holotype (Fig.
45) is deposited in ET.

**regina**


*Tanaecia coelebs regina* was described by **Tsukada** (1991) based on 1♂1♀ from Lampung, southern Sumatra, Indonesia. The holotype is deposited in KMNH.

**silvana**


*Tanaecia clathrata silvanus* was described by **Tsukada** (1991) based on a ♂ specimen from western Sumatra, Indonesia written in the original description, but true locality is Balimbingan, northeastern Sumatra. The holotype (Fig. 18) is housed in RMNH. As *mulsa* cited above, *silvana* is used in this paper instead of *silvanus* in the original description.

**sirius**


This subspecies of *Tanaecia clathrata* was described by **Tsukada** (1991) based on 1♂1♀ from Bangka Is., Indonesia. Although the holotype ♂ has not been traced, the paratype ♀ (Fig. 17) is in author’s collection.

**solium**


**Tsukada** (1991) described *Tanaecia coelebs solium* based on 1♂1♀ from Natuna Is., Indonesia and ♂ was designated as the holotype (Fig. 47). The type series is present in ET.

**subclathrata**


Staudinger (1896) described *Euthalia ellida subclathrata* from Malacca, W. Malaysia. The lectotype ♂ (Fig. 23) (ZMHU) was designated by **Yokochi** (1999).

**violaria**

*Tanaecia violaria* Butler, 1869: 612, pl. 45, fig. 8 ♀. Syntype(s) ♀, Singapore (BMNH).

Butler described *Tanaecia violaria* from Singapore and the figure was ♀ without holotype designation. A syntype ♀ (Fig. 30) is present in BMNH.

**HISTORICAL REVIEW**

(Table 1)

Among 16 taxa above mentioned *clathrata* was first described by **SnelLen van vOllenhoven** (1862). He published 14 taxa of Adoliadini in this work and *clathrata* is included among them. Though this literature is important for this group, two pieces of paper have been published with the same content. Happily this does not affect the type status of the specimens, as these papers were published in the same year 1862. The first is “Bijdrage tot de kennis van het vlindergeslacht Adolias” in the Tijdschrift voor Entomologie vol. 5 (SnelLen van vOllenhoven, 1862b), has three beautiful colour plates and is the most useful one. The last published paper is “Diagnoses specierum novarum e genere Lepidopterum diurorum Adolias, insulas Indiae orientalis inhabitantium” in the Versl. Meded. K. Acad. Wet. Natuurk. 13 (SnelLen van vOllenhoven, 1862a), and this is not true original description. The type series of SnelLen van vOllenhoven’s species are housed in Naturalis Biodiversity Center, Leiden, Netherlands. Then the revisional works on the genus *Tanaecia* were published on Rhopalocera Malayana (Distant, 1883) and Lepidoptera Indica vol. 3 (Moore, 1896–1899). Freustorfer (1913) made a comprehensive systematic work on *Die Gross-Schmetterlinge der Erde* vol. 9 with many new taxa. He classified *T. clathrata* into 3 subspecies.

**Corbet** (1941) revised the genus *Tanaecia* based on the specimens in BMNH. It was the first work dealing with this genus only and resolved many problems. He examined the Fabricius collection in Copenhagen, but he was unable to study the specimens in Museum für Naturkunde der Humboldt-Universität zu Berlin and Rijksmuseum van Natuurlijke Historie in Leiden probably because of the World War II.

**Tsukada** (1991) published “Butterflies of the South East Asian Islands, Part 5, Nymphalidae (II)” based on the previous works and extensive field work by Messrs. Hiroshi **Detani**, the director of Bali Butterfly Park (Bali, Indonesia), Kazuya Nakamoto (Singapore), the late Takuya **Otani**, Shigeo **Yukizaki** and Shinsuke **Takizawa**. This book includes many new findings and systematic arrangements with seven new subspecies.

The late J. N. **Eliot** (1992) revised Corbet & Pendlebury’s *The butterflies of the Malay Peninsula* (4th edition), however there was no remarkable change from the 3rd edition on the genus *Tanaecia* and the system was still following Corbet (1941).

This paper re-examines the character-states of each taxa and presents a new system of the species in this genus (Table 2) based on the former works above mentioned and new findings.

**TAXONOMY**

*Tanaecia clathrata* (SnelLen van vOllenhoven, 1862) (Figs. 1–30)

**Distribution** (Fig. 69): Malay Peninsula (Malaysia, Singapore, southern Thailand), Sumatra, Borneo, Bangka.

**Wings: Male.** Forewing length 26–34mm, variable in size; round apex produced; termen slightly concave; ground colour uniformly black-brown without white patterns; hindwing upperside with bright area tinged from pale purple to blue, on submarginal to marginal region, often extending to middle; submarginal series of black spots present on middle of the
bluish region, shaped from slender streak to acute lunular shape; ground colour of both wings underside dark brown; hindwing margin variably purplish. **Female.** Forewing length 32–37.5mm, variable as male; apex and termen as male; ground colour upperside generally light brown; in some specimens pale purplish blue near tornus present on hindwing upperside. Post discal white band on both wings margined by series of black lunular markings on both sides; basal markings of inner series rounded inwardly on hindwing. Hindwing underside ground colour brown; discal white band conspicuous, often diffused in some localities.

**Antenna:** Uniformly black-brown; beneath light brown and apical 10 segments darkened in male.

**Palpi:** Slender.

**Male genitalia** (Fig. 65): Valva: long and slender; ventral lobe not so swollen; apex not extending to cell; basal markings of inner series rounded inwardly on hindwing. Hindwing upperside distinct. Some specimens from Brunei show slight purplish band? on hindwing uniformly light brown; whitish drab patterns distinct. Some specimens from Brunei show slight purplish band on hindwing. Female hindwing upperside bluish in submarginal 1, 2 and 3 cells; white postdiscal band on both wings upperside distinct.

**Ssp. clathrata** (Figs. 1–15). Distributed in Borneo; variable in size; on male hindwing upperside, postdiscal blue band variable from light blue to pale purple; whitish in 6, 7 cells or, white to brownish patchy in each cell. Female ground colour upperside uniformly light brown; whitish drab patterns distinct. Some specimens from Brunei show slight purplish band? on hindwing and it may be characteristic on lowland populations. The subspecies caerulescens GROSE-SMITH, 1889 is designated as a synonym of clathrata in this work.

**Ssp. sirius** (Figs. 16–17). Distributed in Banka Is.; on male hindwing upperside, postdiscal blue band bright blue and similar to nominotypical subspecies clathrata; underside widely pale purplish on both wings. Female hindwing upperside bluish in submarginal 1, 2 and 3 cells; white postdiscal band on both wings upperside distinct.

**Ssp. siluvana** (Figs. 18–21). Distributed in lowland of Sumatra (except for Aceh Prov., northern Sumatra) except for western mountain region; postdiscal blue band on male hindwing upperside rather dark blue; ground colour deep black-brown; ground colour underside black-brown and marginal purple on hindwing indistinct. Female white postdiscal band on both wings upperside distinct. One female (Fig. 21) is the only known specimen to the author.

**Ssp. violaria** (Figs. 22–30). Distributed in Malay Peninsula (Malaysia, Singapore, southern Thailand) and northern Sumatra (Aceh Prov.). Male from Malay Peninsula (Cameron Highland) large, postdiscal blue band on male hindwing upperside broad (often extending to cell); submarginal series of black streaks small on hindwing upperside. From southern Thailand only a male specimen (Fig. 28) was examined. It is smaller than Malaysian specimens, however, assigned to violaria because of the same wing patterns. From Aceh only a male specimen (Fig. 29) was examined also. It is identical to the Cameron Highland specimens by the large blue band and it is tentatively assigned to violaria. The type specimen is the only known female (Fig. 30). The ground colour of both wings upperside is brown, postdiscal white band is distinct but drab and slightly tinged with purple on the tornus of hindwing. It is doubtful whether this specimen was really collected in Singapore. It is odd that male specimen has not been found in the rather small island of Singapore, an opinion shared by the late Lt. Col. J.N. ÉLIOT (pers. com.). Following the former works, in this paper I regard violaria as the subspecies of the Malay Peninsula, and new female specimens occurring in Malay Peninsula are needed for this problem.

**Tanaecia clathrata (Snellen van Vollenhoven, 1862)**

**Ssp. clathrata (Snellen van Vollenhoven, 1862)**

Adolias clathrata SNELLEN VAN VOLLENHOVEN, 1862a.

Tanaecia caerulescens GROSE-SMITH, 1889. Syn. nov.

Euthalia ellida STAUDINGER, 1896. [Synonymised in coerulescens [sic] by FRUHSTORFER, 1913; synonymised by CORBET, 1941].

**Distribution.** Borneo (TL: Unknown) (Sabah, Sarawak, Brunei, W. Kalimantan, E. Kalimantan, S. Kalimantan).

**Ssp. sirius TSUKADA, 1991**


**Distribution.** Bangka.

**Ssp. siluvana TSUKADA, 1991**


**Distribution.** Sumatra (except Aceh Prov., N. Sumatra) (TL: Balimbingan).

**Ssp. violaria BUTLER, 1869**

Tanaecia violaria BUTLER, 1869.

**Tanaecia nicevillei DISTANT, 1884.** [Synonymised by CORBET, 1941].

**Euthalia ellida subclathrata STAUDINGER, 1896.** [Synonymised in nicevillei by FRUHSTORFER, 1913; synonymised by TSUKADA, 1991].

**Distribution.** W. Malaysia, S. Thailand, Singapore (TL), N. Sumatra.
series of black spots shifted inwardly than T. clathrata and each spot small and not so acute; ground colour underside dark brown and tinged with pale purple near margin of hindwing. **Female.** Forewing length 30.5–35.5mm; same shape as male; both wings upperside ground colour dark brown; postdiscal white band defined by series of black spots on both sides; each spot not so acute as in T. clathrata on forewing and rather flattened on basal series of hindwing; pale purplish near tornus of hindwing upperside. Ground colour underside uniformly dark brown.

**Antenna:** Uniformly black brown; beneath uniformly deep brown.

**Palpi:** Slender.

**Male genitalia** (Fig. 66): Similar to the male genitalia of T. clathrata, but can be separated from it by about ten long spines projecting dorsally on the distal end of gnathos.

**Subspecies:**

*Ssp. heringi* (Figs. 31–37). Distributed in western mountainous region of western Sumatra and not known from eastern lowland; ground colour of male upperside wing black-brown and bluish area of hindwing bright; ground colour underside dark brown and marginal area of hindwing purplish; ground colour of female upperside dark brown and marginal area of hindwing purplish blue. Three male and a female (Figs. 43–44) examined from Tanahmasa Is, Batu Islands are smaller in size, however almost identical with the populations from western mountainous region of Sumatra on wing patterns. Therefore, they are assigned to the nominotypical subspecies.

*Ssp. sriwijaya ssp. nov.* (Figs. 38–41). Distributed in northern Sumatra. This new subspecies is separated from *heringi* by the following characters; the ground colour of underside brighter in male; female submarginal bluish region on hindwing upperside not tinged with purple and shows pale bluish white. Holotype: 1♀, Brastagi, N. Sumatra, length of forewing (LFW) 33mm. The holotype is now preserved in KMNH. Paratypes: 1♂, Sep., 2009, 1♀, Brastagi, N. Sumatra, length of forewing not tinged with purple and shows pale bluish white. Holotype: 1♀, 1985, Lingga Is., LFW 35mm. The holotype is now preserved in KMNH. Paratype: 1♂, Oct., 1995, Singkep Is., Lingga Isls., LFW 29mm. TY.

*Ssp. solium* (Figs. 50–51). Distributed in Sinkep Is. and Lingga Is. Male similar to *heringi*, but differs by marginal area of hindwing underside widely tinged with pale purple; female similar to *solium*, but separable by submarginal pale blue near tornus of hindwing upperside; discal white band more distinct. Holotype: 1♀, 1984, Lingga Is., LFW 35mm. The holotype is now preserved in KMNH. Paratype: 1♂, Oct., 1995, Singkep Is., Lingga Isls., LFW 29mm. TY.

*Ssp. mulsa* (Fig. 52). Only a male specimen collected by Mr. Masatune Miura at Sarawak, Borneo is known and not described as new subspecies here. Forewing length 26mm, small specimen.

### **Tanaecia heringi Niepelt, 1935**

**Tanaecia heringi Niepelt, 1935.**

* Tanaecia coelebs CORBET, 1941. [Invalid name by ICZN, Opinion 1990].

**DISTRIBUTION.** Western mountainous region of W. Sumatra (TL: Padang Bovenland), Tanahmasa (Batu Isls.).

*Ssp. sriwijaya ssp. nov.*

Western mountainous region of N. Sumatra.

**Ssp. regina TSUKADA, 1991**


**DISTRIBUTION.** Western mountainous region of S. Sumatra. (TL: Lampong).

**Ssp. regalis TSUKADA, 1991**


**DISTRIBUTION.** W. Malaysia (TL: Cameron Highlands).

**Ssp. solium TSUKADA, 1991**


**DISTRIBUTION.** Natuna.

**Ssp. riauensis ssp. nov.**

**DISTRIBUTION.** Borneo (Sarawak).

### **Tanaecia mulsa TSUKADA, 1991 stat. nov.**

(Figs. 53–60)

The taxonomic name *mulsa* was described as a subspecies of *T. heringi* (TSUKADA, 1991), but it is assigned here species status. This species was thought to be endemic in Belitung Is. first, then recorded from Bangka Is. (Figs. 55, 56, 58). The male specimen from Bangka Is. is slightly larger than the nominotypical subspecies *mulsa*, but female does not differ from it, so they are assigned to *mulsa*. Moreover two female specimens (Figs. 59, 60) were recorded from Sumatra, but the materials are short to describe them as a new subspecies and they remain only a record here.

**Distribution** (Fig. 69): Belitung Is., Bangka Is, Sumatra.
Wings: Male. Forewing length 24–27mm, smaller than T. clatrata and T. heringi; apex more round than T. clatrata and T. heringi; termen moderately curved outward; ground colour upperside black-brown without white patterns; bluish area on submarginal to marginal region of hindwing upperside, rather drab and not so bright; submarginal series of black spots on hindwing distinct and larger than T. clatrata and T. heringi.

Female. Forewing length 29.5–36mm, smaller and more rounded on apex than T. clatrata and T. heringi; termen almost straight; ground colour upperside dark brown and slightly tinged pale purplish on tornus of hindwing upperside; ground colour of hindwing underside brown; postdisal white band distinct on hindwing; distal black series of lunular markings not so acute basally as in T. clatrata; basal portion of inner black series of markings blunt inwardly; postdisal white band moderately distinct on hindwing underside.

Antenna: Uniformly black-brown; beneath almost light brown.

Palpi: Slender; the shortest of Tanaecia species in this paper at a glance.

Male genitalia (Fig. 67): Resembling the male genitalia of T. heringi, but can be separated from it by several short spines towards anal opening.

Tanaecia mulsa Tsukada, 1991 stat. nov.


DISTRIBUTION. Belitung (TL), Bangka, Sumatra.

Tanaecia nisakai sp. nov.

(Figs. 61–62)

Distribution (Fig. 72): Borneo.

Male. Antennae uniformly black-brown; beneath almost uniformly fuscous brown. Palpi slender. Forewing length 26.5–28mm; round apex produced; termen almost straight. Wings. Upperside: Ground colour of both wings deep black-brown; forewing dark blue marginal band on tornus; hindwing a series of submarginal black markings from 1b to 6 cells, large and oval; short black streak directed to termen from each marking (tadpole-tail shape); bright deep blue submarginal band not beyond the series inwardly; cilia black. Underside: Forewing ground colour deep black-brown; striae traceable on cell and distal margin, but suffused with ground colour and obsolescent; hindwing ground colour deep black-brown and tinged with pale purple on distal margin; black small circular loops (so-called Euthalia wing pattern) present basally; submarginal series of black markings distinct and large especially in 2 and 3 cells; marginal series of black sagittate spots well-marked. Male genitalia (Fig. 68): Valva: long and slender; ventral lobe not so swollen; apex without spines. Uncus: long, slender and gently curved ventrally. Tegumen: Gently projected. Vinculum: Dorsal portion articulated to appendix angularis thickened through its length. Gnathos: gently curved toward anal opening; tip without any spines. Phallos: 2/3 length of valva; cornuti stout.

Female. Unknown.

Holotype. ♂ (Fig. 61), Bongtang, E. Kalimantan, Nov. 1992. LFW28mm, KMNH. Paratype, 1♂ (Fig. 62), Balikpapan, S. Kalimantan, Sep. 1993. LFW26.5mm, KS.

The specific name nisakai is dedicated to Mr. Yoshinobu NISAKA, former ambassador of Japan to Negara Brunei Darussalam and now incumbent governor of Wakayama Prefecture in Japan.

Tanaecia nisakai is distinguishable from T. clatrata, heringi and mulsa by the following character-states: 1) Apex of forewing more acute; 2) ground colour of both wings upperside black-brown intensely; 3) submarginal bluish area on forewing upperside darker, narrower and shifted outwardly from marginal black series of spots; 4) submarginal black series of markings on hindwing upperside large, oval and with narrow black streaks extending to termen; 5) submarginal and marginal black series of markings on hindwing upperside closer to each other.

DISCUSSION

In this paper the species group formerly consisting of two species, i.e., T. clatrata and T. heringi, was rearranged into four species: clatrata, heringi, mulsa and nisakai.

They are both rather rare species. The large islands like Borneo and Sumatra still have many areas not yet researched. For example, clatrata silivana was recently found in Jambi Province, Sumatra, where there has been no record of this group before, and a new record of the species has been procured from southern Sumatra, where much field work has been done, yielding many species. In addition to these facts, the individual variations probably caused by the differences in elevation and rainfall, are remarkable in Borneo and Sumatra and it also makes the natural and stable classification of each species difficult.

A large number of insect specimens have been imported to Japan from the middle of last century, but there are still many unknown fields for the study of butterfly fauna. We should collect and examine more new materials and data to clear these problems, however cutting forests and warming weather causes unfavorable changes to the environment of butterflies and they seriously affect our research.

In this paper I examined T. clatrata and its related species of the genus Tanaecia distributed in Southeastern Asia Islands and Malay Peninsula. Only sixteen taxa was picked up from this huge genus consisted of more than 140 taxa, but many problems mentioned above were found. They will be discussed in the following papers.

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LITERATURES


日本語要旨


本属に共通する特徴である、いわゆる *Euthalia* 種が後翅裏面に出現することはずらしい。*♀* においては、前翅表面地色はほぼ一様に黒褐色を呈し、外縁中央部附近から後角にかけて青色帯を認める。後翅表面の外縁には太く明瞭な青色帯が出現する。また裏面地色は紫色を帯びる。その他の種、例えば *T. munda* (Fruhstorfer, 1899) では後翅表面の外縁に青色を呈する型が出現するが、前翅表面は一様に黒色ではなく濃褐色で白色（混濁することが多い）紋が出現すること、裏面は紫色を帯びない。またがっちりした翅形の印象であることから鑑別はさほど困難ではない。これに対して、♀は鑑別が極めて困難で、両種が他の *Tanaecia* 属と区別できる明確な特徴はほとんどない。塚田 (1991) でも、*T. clathrata* の ♀は後翅白条の基部側が尖らず平滑に見える。とあるのみで詳細な鑑別点はまったく明記されていない。茶褐色の地色はほぼ *Tanaecia* 属で共通で、白斑および黒紋の配置はどの種も非常に似通っており、鑑別は極めて難しい。

本稿で扱う *T. clathrata, T. heringi* に関連するのは 16 タクサ。*Tanaecia* 属の外はタイプ標本を実験した、*caerulecens, clathrata, coelebs, ellida, heringi, lautensis, multis, nicevillei, purpurea, regalis, regina, silavana, sirius, solium, subclathrata, violaria*。

各タクサの特徴を再検討し、種の分類を改めて提示し、以下に 4 種とした。

*Tanaecia clathrata* (Snellen van Vollenhoven, 1862)
*Tanaecia heringi* Niepelt, 1935
*Tanaecia multa* Tsukada, 1991
*Tanaecia nisakai* sp. nov.
Table 1. Taxonomic history of Genus Tanaecia.

<table>
<thead>
<tr>
<th>Taxonomic name</th>
<th>Author &amp; Year</th>
<th>Type</th>
<th>Locality</th>
<th>Fruhstorfer, 1913</th>
<th>Corbet, 1941</th>
<th>Takada, 1991</th>
<th>Eliot, 1992</th>
<th>Yokochi, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>clathrata</td>
<td>NIEFELD, 1933</td>
<td>Corbet, 1941</td>
<td>Singapore</td>
<td>No taxonomical status proposed</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>sriwijaya</td>
<td>ELIOT, 1992</td>
<td>Corbet, 1941</td>
<td>Singapore</td>
<td>No taxonomical status proposed</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>heringi</td>
<td>YOKOCHI, 2016</td>
<td>T. clathrata (as species)</td>
<td>Palawan</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>mulsa</td>
<td>REBEL, 1913</td>
<td>T. clathrata (as species)</td>
<td>Mindanao</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>nisakai</td>
<td>REBEL, 1913</td>
<td>T. clathrata (as species)</td>
<td>Borneo</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>regina</td>
<td>REBEL, 1913</td>
<td>T. clathrata (as species)</td>
<td>Borneo</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>laevis</td>
<td>REBEL, 1913</td>
<td>T. clathrata (as species)</td>
<td>Borneo</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>rubra</td>
<td>REBEL, 1913</td>
<td>T. clathrata (as species)</td>
<td>Borneo</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>solium</td>
<td>REBEL, 1913</td>
<td>T. clathrata (as species)</td>
<td>Borneo</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>clathrata</td>
<td>HENRICK, 1913</td>
<td>T. clathrata (as species)</td>
<td>Borneo</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>violaria</td>
<td>CORBET, 1941</td>
<td>T. clathrata (as species)</td>
<td>Borneo</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
<tr>
<td>nicevillei</td>
<td>TAKASHI YOKOCHI, 2016</td>
<td>T. clathrata (as species)</td>
<td>Borneo</td>
<td>no name, referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
<td>not referred</td>
</tr>
</tbody>
</table>

Table 2. Differential diagnosis of wing shape and pattern in male between Tanaecia clathrata, T. heringi, T. mulsa, and T. nisakai.

<table>
<thead>
<tr>
<th></th>
<th>T. clathrata</th>
<th>T. heringi</th>
<th>T. mulsa</th>
<th>T. nisakai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Size (Forewing length)</td>
<td>26 – 34mm (variable)</td>
<td>26 – 31mm</td>
<td>24 – 27mm (smaller than T. clathrata and T. heringi)</td>
<td>26.5 – 28mm</td>
</tr>
<tr>
<td>Forewing apex</td>
<td>Round and produced</td>
<td>Round and produced</td>
<td>Rounder than T. clathrata and T. heringi</td>
<td>More acute than T. clathrata, T. heringi, and T. mulsa</td>
</tr>
<tr>
<td>Forewing termen</td>
<td>Slightly concave</td>
<td>Slightly concave</td>
<td>Moderately curved outward</td>
<td>Almost straight</td>
</tr>
<tr>
<td>Ground colour undersides</td>
<td>Black-brown without white patterns</td>
<td>Black-brown without white patterns</td>
<td>Black-brown without white patterns</td>
<td>Black-brown intensely</td>
</tr>
<tr>
<td>Hindwing undersides with bright areas</td>
<td>Tinged from pale purple to blue, on submarginal to marginal region, often extending to middle</td>
<td>Marginal blue area bright, variable from purple to pale blue in same tone</td>
<td>Rather drab and not so bright</td>
<td>Darker, narrower and shifted outwardly from marginal black series of spots</td>
</tr>
<tr>
<td>Submarginal series of black spots</td>
<td>Present on middle of the bluish region, from slender streak to acute lunular shape</td>
<td>Shifted inwardly; each spot small and not so acute</td>
<td>Distinct and larger than T. clathrata and T. heringi</td>
<td>Large, oval and with narrow black streaks extending to termen</td>
</tr>
<tr>
<td>Ground colour underside</td>
<td>Both wings dark brown; hindwing margin variably purplish</td>
<td>Dark brown and tinged with pale purple near margin of hindwing</td>
<td>Black brown and tinged with pale purple near margin of hindwing</td>
<td>Deep black-brown and tinged with pale purple on distal margin</td>
</tr>
</tbody>
</table>
Table 3. Differential diagnosis of wing shape and pattern in female between *Tanaecia clathrata*, *T. heringi*, and *T. mulsa*.

<table>
<thead>
<tr>
<th></th>
<th><em>T. clathrata</em></th>
<th><em>T. heringi</em></th>
<th><em>T. mulsa</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Size (Forewing length)</td>
<td>32 – 37.5mm (variable)</td>
<td>30.5 – 35.5mm</td>
<td>29.5 – 36mm (smaller than <em>T. clathrata</em> and <em>T. heringi</em>)</td>
</tr>
<tr>
<td>Forewing apex</td>
<td>Round and produced</td>
<td>Round and produced</td>
<td>Rounder than <em>T. clathrata</em> and <em>T. heringi</em></td>
</tr>
<tr>
<td>Forewing termen</td>
<td>Slightly concave</td>
<td>Slightly concave</td>
<td>Almost straight</td>
</tr>
<tr>
<td>Ground colour upperside</td>
<td>Generally light brown; in some specimens pale purplish blue near tornus present on hindwing upperside</td>
<td>Dark brown; pale purplish near tornus</td>
<td>Dark brown and slightly tinged pale purplish on tornus of hindwing upperside</td>
</tr>
<tr>
<td>Post discal white band on hindwing</td>
<td>Conspicuous, often diffused in some localities</td>
<td>Distinct</td>
<td>Distinct</td>
</tr>
<tr>
<td>Post discal white band on both wings</td>
<td>Margined by series of black lunular markings on both sides</td>
<td>Not so acute as in <em>T. clathrata</em> on forewing</td>
<td>Not so acute as in <em>T. clathrata</em> on forewing</td>
</tr>
<tr>
<td>Basal markings of inner series</td>
<td>Rounded inwardly on hindwing</td>
<td>Rather flattened</td>
<td>Rounded inwardly on hindwing</td>
</tr>
<tr>
<td>Ground colour underside</td>
<td>Brown</td>
<td>Dark brown</td>
<td>Brown</td>
</tr>
</tbody>
</table>
Fig. 65. Male genitalia of *T. clathrata*.

Fig. 66. Male genitalia of *T. heringi*.

Fig. 67. Male genitalia of *T. mulsa*.

Fig. 68. Male genitalia of *T. nisakai*.
Note on the Genus *Tanaecia* (1)

Fig. 69. *T. clathrata.*

Fig. 70. *T. heringi.*

Fig. 71. *T. mulsa.*

Fig. 72. *T. nisakai.*
Fig. 1. Ssp. clathrata. ♂, holotype of clathrata, [Borneo]. NCB.

Fig. 4. Ssp. clathrata. ♂, Canling Buru, S. Kalimantan. TY.

Fig. 5. Ssp. clathrata. ♂, Crocker Range, Sabah. TY.

Fig. 2. Ssp. clathrata. ♂, syntype of caerulescens, Kinabaru, Sabah. BMNH.

Fig. 6. Ssp. clathrata. ♂, Pontianak, W. Kalimantan. TY.

Fig. 3. Ssp. clathrata. ♂, holotype of ellida, Sarawak. ZMHU.

Fig. 7. Ssp. clathrata. ♂, Pontianak, W. Kalimantan. TY.

Fig. 4. Ssp. clathrata. ♂, Canling Buru, S. Kalimantan. TY.

Fig. 8. Ssp. clathrata. ♂, Mt. Serapi, Sarawak. TY.
Note on the Genus *Tanaecia* (1)

Fig. 9. Ssp. *clathrata* ♂, Brunei. YN.

Fig. 10. Ssp. *clathrata* ♂, Brunei. YN.

Fig. 11. Ssp. *clathrata* ♀, Balikpapan, E. Kalimantan. TY.

Fig. 12. Ssp. *clathrata* ♀, Balikpapan, E. Kalimantan. TY.

Fig. 13. Ssp. *clathrata* ♀, Enau Ambawangan, W. Kalimantan. TY.

Fig. 14. Ssp. *clathrata* ♀, Brunei. YN.

Fig. 15. Ssp. *clathrata* ♀, Brunei. TY.

Fig. 16. Ssp. *sirius* ♂, Bangka. TY.
Fig. 17. Ssp. *sirius*. ♀, paratype of *sirius*, Bangka. TY.

Fig. 18. Ssp. *siluvana*. ♂, holotype of *siluvana*, Balimbingan, N. Sumatra. NCB.

Fig. 19. Ssp. *siluvana*. ♂, Siak, Riau. TY.

Fig. 20. Ssp. *siluvana*. ♀, Siak, Riau. TY.

Fig. 21. Ssp. *siluvana*. ♂, Siak, Riau. TY.

Fig. 22. Ssp. *violaria*. ♂, labeled as *nicevillei*, Perak, W. Malaysia, BMNH.

Fig. 23. Ssp. *violaria*. ♂, lectotype of *subclathrata*, Malacca, W. Malaysia. ZMHU.

Fig. 24. Ssp. *violaria*. ♀, Cameron Highlands, W. Malaysia. TY.
Note on the Genus *Tanaecia* (1)
Fig. 33. Ssp. *heringi* ♂, Mt. Sanggul, Bengkulu. TY.

Fig. 34. Ssp. *heringi* ♂, Harau Valley, W. Sumatra. TY.

Fig. 35. Ssp. *heringi* ♂, Tanahmasa. TY.

Fig. 36. Ssp. *heringi* ♀, Harau Valley, W. Sumatra. TY.

Fig. 37. Ssp. *heringi* ♀, Tanahmasa. TY.

Fig. 38. Ssp. *sriwijaya* ssp. nov. ♂, paratype. Bandar Baru, N. Sumatra. KMNH.

Fig. 39. Ssp. *sriwijaya* ssp. nov. ♂, paratype. Bandar Baru, N. Sumatra. TY.

Fig. 40. Ssp. *sriwijaya* ssp. nov. ♀, holotype. Brastagi, N. Sumatra. KMNH.
Note on the Genus *Tanaecia* (1)

Fig. 41. Ssp. *srivijaya* ssp. nov. ♀, paratype. Sibolangit, N. Sumatra. KS.

Fig. 42. Ssp. *regina* ♂, holotype of *regina*, Lampong. KMNH.

Fig. 43. Ssp. *regina* ♀, Mt. Dempo, S. Sumatra. TY.

Fig. 44. Ssp. *regina* ♀, Mt. Dempo, S. Sumatra. TY.

Fig. 45. Ssp. *regalis* ♂, holotype of *regalis*, Cameron Highlands, W. Malaysia. ET.

Fig. 46. Ssp. *regalis* ♂, Cameron Highlands, W. Malaysia. TY.

Fig. 47. Ssp. *solium* ♂, holotype of *solium*, Natuna. ET.

Fig. 48. Ssp. *solium* ♂, Natuna. KS.
Fig. 49. Ssp. *solium* ♀, Natuna. TY.

Fig. 50. Ssp. *riauensis* ssp. nov. ♂, paratype, Singkep. TY.

Fig. 51. Ssp. *riauensis* ssp. nov. ♀, holotype, Lingga. KMNH.

Fig. 52. Ssp. ♂, Kuching, Sarawak. KS.

Fig. 53. ♂, Belitung, paratype of *mulsa*. TY.

Fig. 54. ♂, Belitung. TY.

Fig. 55. ♂, Bangka. TY.

Fig. 56. ♂, Bangka. TY.
Note on the Genus *Tanaecia* (1)

Fig. 57. ♂, Belitung, paratype of *mulsa*. TY.

Fig. 58. ♂, Bangka. TY.

Fig. 59. ♂, Brastagi, N. Sumatra. TY.

Fig. 60. ♂, Lampong. TY.

Fig. 61. ♂, holotype, Bongtang, E. Kalimantan. KMNH.

Fig. 62. ♂, paratype, Balikpapan, S. Kalimantan. KS.

Fig. 63. Holotype of *lautensis*. ♂, Laut. KMNH.

Fig. 64. Holotype of *purpurea*, Lawas, ♂, Sabah. MNHN.

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