Moths from Mahakirau Forest Estate, Manaia, Coromandel, New Zealand, 2015 – 2026: an annotated list

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Abstract

We provide a list of the Lepidoptera recorded during the first author's residence at the Mahakirau Forest Estate from 2015 to 2026 with annotations. A total of 423 species is recorded, representing the longest list of species so far recorded for a single restricted site in northern New Zealand. The most significant finds are briefly discussed and the list compared to those for forested areas of the Auckland district.

Introduction

The Mahakirau Forest Estate comprises approximately 600 hectares of mature broadleaf/podocarp QEII convenanted forest located on the crest of the upper Coromandel Range. Many of the ancient trees, such as kauri (*Agathis australis*), would have been cleared during earlier logging operations; nevertheless much of the remaining forest can be considered relatively pristine. There are significant areas of kānuka (*Kunzea ericoides*), fivefinger (*Pseudopanax arboreus*), rewarewa (*Knightia excelsa*), māhoe (*Melicytus ramiflorus*), putaputawētā (*Carpodetus serratus*), nikau palm *(Rhopalostylis sapida),* māpou (*Myrsine australis*) interposed with taraire (*Beilschmiedia taraire*) and northern rātā (*Metrosideros robusta*), and mature podocarps such as Hall's tōtara (*Podocarpus hallii*) and rimu (*Dacrydium cupressinum*).

The entrance, with co-ordinates -36.846°, 175.548° is accessed through a password-protected electric gate located off the 309 Road which links Coromandel and Whitianga townships. The estate itself, with altitudes ranging from 250 to 550 m, is sub-divided into 25 lots, from 15 to 25

hectares each, including an allocated build site accessed off a sealed easement road traversing the estate. AJS's first property on the estate, with co-ordinates -36.866°, 175.547° was purchased in March 2015, with initial light trapping commencing in November 2015. Catches were recorded on iNaturalist and a reference collection established with voucher specimens.

In February 2018, due to changing personal circumstances, a decision was made to sell up and return to the UK permanently. AJS donated the valuable collection to the New Zealand Arthropod Collection (NZAC) at Manaaki Whenua Landcare Research (now Bioeconomy Science Institute) in Auckland. RJBH subequently transferred the specimens which added significantly to knowledge of Coromandel's fauna, formerly rather poorly represented in any collection. It should be noted that whilst the Lepidoptera fauna of the Auckland district (AK, as defined by Crosby et al. 1998) has been relatively well sampled (see, e.g., Emmerson & Hoare 2019) that of the Coromandel district, CL, is far less well studied, and the current list represents the first major survey to be published. Many collection records from the CL district remain unpublished. A short list of 61 species recorded from Hauturu (Little Barrier Island) was included in the book by Wade and Veitch (2019), but one name (*Azelina venustula*) listed is a synonym of another (*Ischalis gallaria*) so the actual list is 60 species. This undoubtedly represents only a fraction of the Lepidoptera diversity of this very important island.

At the end of 2021, after three and a half years living in the UK, AJS made the decision to return to New Zealand and to Mahakirau Forest Estate, but this time to a different plot. The new location's immediate habitat differs noticeably to the previous in being far more open, hence exposed, and at a lower altitude (circa 310m) with large areas of exotic weeds such as gorse and blackberry which are slowly being restored to native shrubland. The rest of the surounding property, circa 12 hectares, comprises QEII covenanted bush.

Shortly after moving back to New Zealand AJS decided to re-commence a survey and monitoring programme and put together a new collection however, this time with a focus on the micro-moths. Whilst the majority of the light trapping nights were carried out at AJS's property, on occasion

other sites on the estate were sampled both at night and during the day time.

Methods

Moths were either trapped with a 125-Watt mercury vapour light fitted to a Robinson-pattern moth trap run off mains electricity or a home-made set-up utilising a m.v. lamp only, positioned on a large white sheet on the property's deck. Many moths, whilst attracted by the light, chose to settle on the adjacent building's walls and windows enabling their inspection and recording. The technique of regularly 'patrolling' the immediate vicinity increased the chances of spotting fleeting visitors before their inevitable departure.

When sampling at more remote locations a portable generator was used to provide power. Infrequently a portable Heath Trap with a 40W actinic (blue) tube run off a 12v DC battery was used. The normal procedure was to run the traps for no more then 2 to 3 hours after dark, taking into consideration whether conditions were considered suitable, i.e relatively mild, perferably overcast with little to no wind.

Surveys were performed throughout the year, more frequently either side of winter, and species uploaded to iNaturalist allowing for subsequent confirmation of identification when necessary. Specimens of doubtful identity, mainly micro-moths, were compared with material in the New Zealand Arthropod Collection (NZAC) and identified by RJBH. Moths were also recorded when seen during the day and at the house windows at night. All the species listed are represented by voucher specimens, located either in AJS's (2nd) personal collection in Mahakirau or in NZAC (1st collection).

The general procedure has been to compile a species list from each mothing event and then to upload to iNaturalist observations of note, i.e. unusual or unique records. The number of specimens of each species, i.e. abundance data, was only recorded when considered noteworthy by the first author. Hence, assessments of species status given in lists are usually subjective and reflect overall impressions of frequency and abundance; however, an attempt is made here to give a degree of rigour to these assessments based on the following guidelines derived from Emmerson and Hoare (2019). Species seen in at least 80% of the counts during their

flight period are judged to be ‘very common’; those recorded in between 50% and 80% of counts are ‘common’ and those between 20% and 50% ‘fairly common’. Those recorded in less than 20% of samples during their flight-time are ‘uncommon’. For those species for which there are few records, the date for each record is given. More subjectively, very common species that are often observed in numbers (i.e. 10 or more per sampling event) are described as ‘abundant’.

The classification largely follows Dugdale (1988) as updated by Hoare (2010), but the order of families is taken from van Nieukerken *et al*. (2011), and the family classification of Gelechioidea follows Heikkilä *et al.* (2014) as updated by Yapar *et al.* (2025), and that of Tineoidea follows Regier *et al.* (2015). Nomenclature of Scopariinae follows the online guide of Hoare and Rhode (2015), and there are some updates to Noctuidae arising from the revisions of Hoare (2017; 2019). Identification/interpretation of problematic names in unrevised groups (e.g. Oecophoridae) follows that in NZAC, and some changes are likely following revisionary work. Usage of the abbreviations ‘sp. near’ (or ‘sp. nr’) and ‘cf.’ follows Hoare (2001), except that *Pasiphila* sp. cf. *magnimaculata* (Geometridae) is certainly an unnamed species distinct from *P. magnimaculata*; the name is used here because of its appearance in the latest threat assessment of New Zealand Lepidoptera (Hoare *et al.* 2026). Where current subfamily or genus placement of a species is doubtful or incorrect, the affected name is followed by ‘s.l.’ (in parentheses after the genus), indicating ‘in the broad sense’ (*sensu lato*). Where more than one species may currently be confused under a name in an unrevised group, the species name is followed by ‘s.l.’.

Results and Discussion

Lepidoptera species list comparison

The total of 423 species recorded across the Mahakirau Forest Estate during the period 2015 – 2026 represents by far the most significant survey of the Lepidoptera of the Coromandel peninsula.

There have been numerous short- to medium-term Lepidoptera surveys published from single localities in New Zealand since 1960; see Emmerson and Hoare (2019). These lists differ quite substantially in area covered, local habitat, period of survey, and collecting methodology and

intensity. With the caveats outlined above, the Mahakirau list is the richest in total species followed by the Hawkes Bay (Davies 1973) list at 376 species and then the Redvale, AK (Emmerson & Hoare 2019) list at 357 species.

Further context for this survey is provided by two unpublished lists currently being compiled by RJBH. These are (1) the cumulative list (see Introduction) of Lepidoptera species recorded in the Auckland district (AK) and (2) a cumulative list of those recorded in the Waitakere Ranges of west Auckland. At the time of writing (2026), the Auckland list includes 812 species (of which 19 are considered 'accidentals', i.e. non-established adventives that have occurred once only, or which established briefly and were exterminated). The Waitakere Ranges list includes 663 species. Both lists, like the present one, include unnamed species recognised as such in NZAC.

Notable records

For Biostatus abbreviations (E, N, A, V) after each species name, see below under 'Species List'.

***Schiffermuelleria (s.l.) orthophanes* E.** First recorded in November 2022 attracted to a 40W Heath Trap adjacent to the bush. On January 2025 a second example was discovered inside AJS's bathroom during the daytime.
***Trachypepla cyphonias* E (Fig. 1).** Recorded once at 11 Mahakirau Road in December 2023 then at 25 Mahakirau Road in February 2024. Threat status 'Naturally Uncommon'. Associated with trapped leaf-litter of kānuka (reared specimens in NZAC).
***Ochetarcha* sp. A. E (Fig. 2).** Unnamed species recorded once in April 2025. Larvae feed in rachides of silver fern (*Alsophila dealbata*).
***Amblyptilia deprivatalis* E.** Two at m.v. light in Jan 2017 (both in NZAC). This probably represents the first published record of this mysterious species since its description by Walker in 1864. However, there is a specimen in NZAC that also appears to belong to *A. deprivatalis*, collected by Alfred Philpott at Nelson on 3 July 1927; this specimen is missing its abdomen. It can be distinguished from the common *A. repletalis* by the almost unpatterned yellowish forewing that lacks transverse strigulae, and by the pallid base to the hind-tibia (brownish in *A. repletalis*). Note that what has been referred to as '*Platyptilia deprivatalis*' in the literature, e.g. by Hudson (1928), is a very strongly marked moth that does not resemble Walker's type of *deprivatalis* at all, and appears to be an unnamed

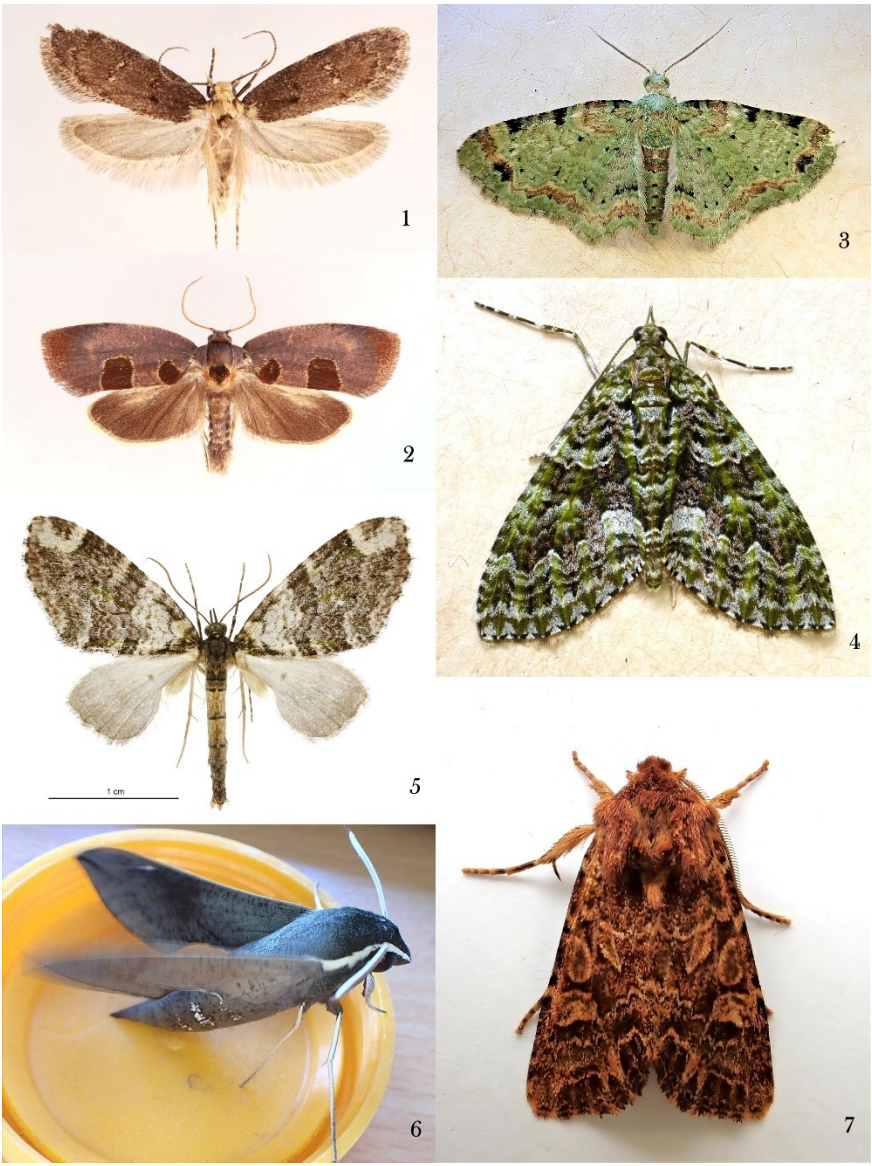
species related to *P. campsiptera*.
***Pasiphila* sp. cf. *magnimaculata* E (Fig. 3).** Unnamed 'Jade Green' pug whose larvae feeds on *Brachyglottis kirkii* flowers. First recorded in August 2016 attracted to UV light then occasionaly from August to October every year. An early spring season species.
***Tatosoma agrionata* E (Fig. 4).** First recorded in October 2022 and then subsequently on four more occasions through to January. By far the most northerly records. Larvae are mistletoe feeders.
***Tatosoma apicipallida* E (Fig. 5)**. First recorded on 11 Oct 2016, followed by regular observations through spring. At the very north of its range. Host-plant unknown.
***Hippotion scrofa* V (Fig. 6).** First record for New Zealand was at Mahakirau in February 2025. A common moth in South Eastern Australia. A second example was observed in Whangarei on 26th February 2025 and recorded on iNaturalist.
***Ichneutica brunneosa* E (Fig. 7).** At the north of its range, first recorded in October 2016 and then on 6 further occasions throughout summer months. A regular visitor to U.V. lamps. Host-plant unknown.

Species List
The following abbreviations after the species name indicate the presumed biostatus of each species in New Zealand: E= Endemic, A= Adventive, N=Native, V=Vagrant.

Micropterigidae (3 species)
***Zealandopterix zonodoxa* E.** Can be commonly found resting on outside walls during the daytime in November and December. Occasional visitors to light.
***Sabatinca doroxena* E.** More than half a dozen recorded at light in November 2017.
***Sabatinca lucilia* E.** Recorded once at light, in February 2017.

Hepialidae (2 species)
***Aenetus virescens* E.** Males extremely common at the light trap all year round but abundant from late summer. Females only occasionally encountered and never at a light trap.
***Dumbletonius unimaculatus* E.** Very common in late summer, e.g. January and February.

Heliozelidae (1 species)
***Heliozela catoptrias* A.** Recorded once in November 2024 but minute and inconspicuous so likely to be much more common. The identity of this adventive species needs checking; Australian species of *Heliozela* are unrevised and the identification is based on superficial appearance only. It is a leaf-miner on kānuka.



Significant records from Mahakirau. Live specimens are from Mahakirau, photographed by AJS; set specimens are non-CL specimens in NZAC. Fig. 1, *Trachypepla cyphonias* (Oecophoridae); 2, *Ochetarcha* sp. A (Tortricidae); 3, *Pasiphila* sp. cf. *magnimaculata* (Geometridae); 4, *Tatosoma agrionata* (Geometridae); 5, *T. apicipallida* (Geometridae); 6, *Hippotion scrofa* (Sphingidae); 7, *Ichneutica brunneosa* (Noctuidae).

Cecidosidae (1 species)
Xanadoses nielseni Hoare & Dugdale E. Recorded for the first time in December 2025.

Psychidae (6 species)
Cebysa leucotelus **A.** First recorded (male) in March 2025 during the daytime.
Liothula omnivora **E.** Larval cases common; they are presumed to belong to this species, but the case of the unnamed *Liothula* mentioned below is unknown so some may possibly be referable to that species.
Liothula **sp. A. E.** Fairly common at light, an unnamed species which is closely related to *omnivora* but emerges in March to early April and has more transparent hindwings. Larval case unknown.
Lepidoscia heliochares **A.** Uncommon with only a single record in September 2023; attracted to light.
Lepidoscia protorna **A.** Extremely common, occuring throughout the summer (December through to April).
Lepidoscia lainodes **A.** Uncommon with only a single record in July 2025 during daytime.

Tineidae (34 species)
Habrophila compseuta **E.** Recorded at two separate locations in November and February.
Sagephora phortegella **E.** Common from November to January.
Amphixystis hapsimacha **E.** Recorded from November to February every year.
Archyala paraglypta **E.** Fairly common, recorded from December to February.
Crypsitricha agriopa **E.** Recorded once, in January 2022.
Crypsitricha generosa **E.** Common, recorded from September to June.
Crypsitricha mesotypa **E.** Recorded from September to December.
Crypsitricha pharotoma **E.** Fairly common, recorded late spring/early summer.
Crypsitricha roseata **E.** Fairly common, recorded in December, January and February.
Endophthora omogramma **E.** First recorded in February 2023, then on two further occasions in November and December.
Endophthora pallacopis **E.** Only recorded once, in December 2022.
Endophthora rubiginella **E.** Scarce, only recorded once in January 2025.
Erechthias chasmatias **E.** Recorded regularly in November and December.
Erechthias chionodira **E.** Recorded on several occasions in January and February.
Erechthias exospila **E.** Recorded once, in December 2024.
Erechthias hemiclistra **E.** Recorded for the first time in December and then March 2025.
Erechthias stilbella **E.** Recorded twice in January 2025.
Lysiphragma epixyla **E.** First recorded in December 2016 then January 2025. More than one species is currently confused under this name (RJBH, pers. obs.) but the Mahakirau specimens are the true *L. epixyla*.

***Monopis crocicapitella* A.** Attracted to moth traps in low numbers throughout the year.
***Monopis dimorphella* E.** First recorded in April 2025.
***Monopis ethelella* A.** Attracted to moth traps in low numbers throughout the year.
***Monopis* sp. near *icterogastra* A.** Fairly common, first recorded in March 2023.
***Monopis ornithias* E.** First recorded in January 2023, then the following December, both during daytime indoors.
***Opogona omoscopa* A.** Very common and can be encountered throughout the year.
***Prothinodes grammocosma* E.** Uncommon, recorded in late spring. There is currently uncertainty in differentiating between the two *Prothinodes*, see *P. lutata* below.
***Prothinodes lutata* E.** Larger and paler specimens without a distinct longitudinal streak are tentatively referred to *P. lutata* here. Variation is such that dissection will be required to confirm; there appear to be differences in male genitalia between the two species (RJBH, pers. obs.).
***Tephrosara cimmeria* E.** Only recorded twice, in March and April, both indoors during daytime.
***Tinea* (s.l.) *argodelta* E.** Scarce, recorded once in March 2024 indoors during daytime.
***Tinea* (s.l.) *belonota* E.** Recorded twice, in February 2023 and March 2025.
***Tinea* (s.l.) *conferta* E.** Recorded in October, November and December.
***Tinea* (s.l.) *conspecta* E.** Recorded at a number of MFE sites. In November 2023, two individuals flying over rotting logs in native bush at sunset.
***Tinea* (s.l.) *fagicola* E.** Recorded for the first time on 21 December 2025.
***Tinea* (s.l.) *margaritis* E.** Recorded for the first time on 24 November 2025.
***Trithamnora certella* E.** Recorded once on an outside window during daytime in November 2022.

Roeslerstammiidae (2 species)
***Dolichernis chloroleuca* E.** Only recorded once, in April 2023.
***Vanicela disjunctella* E.** Only recorded once, in February 2025.

Gracillariidae (8 species)
***Acrocercops* (s.l.) *leucocyma* E.** Recorded twice, once in November and then December.
***Caloptilia chalcodelta* E.** Recorded in June and December.
***Caloptilia chrysitis* E.** Common from November to February.
***Caloptilia linearis* E.** Commonly recorded from October to April.
***Conopomorpha cyanospila* E.** Recorded once when attracted to light in February 2025. Surprising as no mature titoki is present on the estate.
***Eumetriochroa* (s.l.) *panacitorsens* E.** Recorded once, in January 2023.
***Eumetriochroa* (s.l.) *panacivagans* E.** Recorded once, in December 2021.
***Macarostola miniella* E.** Quite common, first recorded in January 2023.

Yponomeutidae (1 species)
***Zelleria porphyraula* E.** Recorded twice, in February 2023 and then November 2025.

Plutellidae (2 species)
***Leuroperna sera* N.** Recorded twice, both in January.
***Plutella xylostella* A.** Very common, recorded through summer and early autumn.

Glyphipterigidae (10 species)
***Chrysorthenches drosochalca* E.** Common from October to March.
***Chrysorthenches glypharcha* E**. Recorded for the first time on 21 December 2025.
***Chrysorthenches polita* E.** Fairly common from October to March.
***Chrysorthenches porphyritis* E.** Common from October to March with a couple of August records.
***Doxophyrtis hydrocosma* E.** Fairly common, recorded from October to February.
***Glyphipterix leptosema* E.** Only recorded once, in November 2017.
***Glyphipterix tungella* E.** Recorded once, in January 2023.
***Glyphipterix zelota* E.** Recorded once, in December 2023 during daytime sweeping of ponga.
***Proditrix gahniae* E.** Recorded twice, once in January and once February.
***Proditrix tetragona* E.** Uncommon, first recorded in March 2016, then in September and December. Usually attracted to UV Light.

Praydidae (1 species)
***Prays nephelomima* A.** Recorded once, in January 2023, attracted to UV light.

Lyonetiidae (1 species)
***Stegommata sulfuratella* A.** Fairly common, recorded from December to January.

Family unknown (1 species)
***Cadmogenes literata* E.** Recorded twice, once in November and then December.

Lecithoceridae (3 species)
***Compsistis bifaciella* E.** Common in early summer, often swept from roadside vegetation during daytime.
***Lecithocera micromela* A.** First recorded in November 2016 and then March 2024.
***Sarisophora leucoscia* A.** Only recorded once, in January 2025.

Xyloryctidae (28 species)
***Gymnobathra dinocosma* E.** Fairly common, recorded in November and December.
***Gymnobathra flavidella* E.** Very common through the summer months. There may be two species under this name, in which case both occur on the estate.
***Gymnobathra hyetodes* E.** Common, occuring throughout the summer, sometimes

during daytime.
***Gymnobathra omphalota* E.** Fairly common, all records in November.
***Gymnobathra sarcoxantha* E.** Only recorded once, in December 2022 during the daytime.
***Gymnobathra tholodella* E.** Very common, recorded from January to April.
***Lathicrossa leucocentra* E.** Recorded twice, once in October and January.
***Hierodoris atychioides* E.** Recorded once at light, in December 2022.
***Hierodoris illita* E.** Recorded once in January 2017, then twice in November 2025 and again in December.
***Hierodoris stella* E.** Recorded once, in December 2017 in daytime.
***Hierodoris tygris* E.** Recorded once, in March 2017 and for a second time in February 2026.
***Izatha attactella* E.** Fairly common, recorded from August to October.
***Izatha austera* E** Fairly common, recorded in November, December and January at light.
***Izatha balanophora* E.** Only recorded once, in December 2016.
***Izatha blepharidota* E.** Uncommon, recorded in November and December.
***Izatha churtoni* E.** Common during the summer.
***Izatha dasydisca* E.** Uncommon, first recorded in November 2017 then January 2023, January 2026 and February 2026.
***Izatha epiphanes* E.** Common from November to February.
***Izatha gibbsi* E.** Recorded for the first time on 17 February 2026.
***Izatha hudsoni* E.** Common from October to December.
***Izatha mesoschista* E.** Recorded twice, in November and December.
***Izatha metadelta* E.** Recorded twice, first in January 2017 then January 2024.
***Izatha peroneanella* E.** Very common throughout the summer.
***Izatha phaeoptila* E.** Fairly common during mid-summer.
***Izatha prasophyta* E.** Recorded once on 27 January 2026.
***Schiffermuelleria* (s.l.) *orthophanes* E.** First recorded in November 2022 attracted to a Heath Trap. On January 2025 a second example was discovered inside the bathroom during the daytime.
***Thamnosara sublitella* E.** Recorded twice, both in November.

Oecophoridae (34 species)
***Atomotricha isogama* E.** Common, recorded from September to January.
***Barea codrella* E.** Recorded once on 13 January 2026.
***Endrosis sarcitrella* A.** Only recorded twice, once in April and once in July, both indoors.
***Eulechria* (s.l.) *zophoessa* E.** Recorded three times, all in January.
***Hofmannophila pseudospretella* A.** Recorded once in October and then December. Both inside buildings.
***Mermeristis spodiaea* E.** Recorded for the first time on 28 September 2025 then 15 January 2026.

***Tachystola acroxantha* A.** Fairly common from October to April.
***Tingena actinias* E.** Fairly common, all records in November.
***Tingena ancogramma* E.** Common from December to February.
***Tingena apanthes* E.** Recorded twice, in February then March.
***Tingena armigerella* E.** Very common, from October to February.
***Tingena chloradelpha* E.** Recorded twice, once in October 2022 and then November 2023.
***Tingena chrysogramma* E.** Common from November to February.
***Tingena clarkei* E.** Very common from December to February.
***Tingena compsogramma* E.** Recorded three times, all in December.
***Tingena contextella* E.** First recorded in November 2023 then November 2024.
***Tingena crotala* E.** Recorded in October 2017 then September 2022.
***Tingena grata* E.** Recorded once, in January 2017.
***Tingena hemimochla* E.** Fairly common, recorded in October, November and December.
***Tingena innotella* E.** Recorded once, in October 2022.
***Tingena nycteris* E.** Recorded once, in December 2021.
***Tingena ombrodella* E.** Recorded three times across two sites, all in November.
***Tingena penthalea* E.** First recorded in January 2018 then September 2022.
***Tingena plagiatella* E.** Fairly common, recorded from October to December.
***Trachypepla amphileuca* E.** Recorded once in December 2022.
***Trachypepla conspicuella* E.** Recorded for the first time on 8 December 2025.
***Trachypepla cyphonias* E.** Recorded once at 11 Mahakirau in December 2023 then at 25 Mahakirau Road in February 2024.
***Trachypepla festiva* E.** Recorded twice, once in December and January.
***Trachypepla galaxias* E.** Very common from November to December.
***Trachypepla hieropis* E**. First recorded in December 2025.
***Trachypepla leucoplanetis* E.** First recorded in November 2016, then December 2024 and November 2025.
***Trachypepla nimbosa* E.** Recorded twice, once in December 2025 and then January 2026.
***Trachypepla protochlora* E.** Only recorded once in December 2017.
***Trachypepla* (s.l.) *indolescens* A.** Recorded from December to February.

Stenomatidae (1 species)
Note. Stenomatidae, formerly a subfamily of Depressariidae, was erected to full family rank by Yapar *et al*. (2025).
***Agriophara colligatella* E.** Recorded in January and March 2017 and then in November 2025 at a different location.

Depressariidae (4 species)
***Agonopterix umbellana* A.** Gorse feeder, only recorded once in August 2022.
***Donacostola notabilis* E.** Recorded three times, November, December and January.

***Nymphostola galactina* E.** Fairly common, recorded at a number of sites from October to January.
***Phaeosaces coarctatella* E.** Common, but all records in October.

Cosmopterigidae (2 species)
***Pyroderces* (s.l.) *apparitella* E.** Fairly common from December to January.
***Pyroderces* (s.l.) *deamatella* E.** Fairly common, first recorded in January 2023. Attracted to light.

Gelechiidae (5 species)
***Anisoplaca cosmia* A.** First of two records in January 2025.
***Bilobata subsecivella* A.** Only recorded once, in January 2025.
***Phthorimaea operculella* A.** Recorded once, in February 2025.
***Platyedra subcinerea* A.** Recorded once, in January 2025.
***Symmetrischema tangolias* A.** Recorded once, in January 2024.

Elachistidae (6 species)
Note. The updated classification of Yapar *et al*. (2025), which includes *Eutorna* (Cacochroinae) in Elachistidae is followed.
***Elachista archaeonoma* (s.l.) E.** Very common but more than one species may be confused under this name. Yet to be resolved.
***Elachista gerasmia* E.** Recorded once in February and then November 2023.
***Circoxena ditrocha* E.** Fairly common in January and February.
***Microcolona limodes* E.** Very common from October to June.
***Eutorna inornata* (s.l.) E.** Very common, recorded from August to September. Since *E. inornata* is usually a coastal species with larvae on *Goodenia radicans*, the identification of this forest species needs checking.
***Eutorna symmorpha* E.** Very common, recorded from August to April.

Coleophoridae (3 species)
***Coleophora alcyonipennella* A.** Recorded once, in January 2018.
***Coleophora deauratella* A.** Recorded for the first time on 26 November 2025.
***Coleophora mayrella* A.** Only recorded once in March 2017 at the author's first property.

Batrachedridae (2 species)
***Batrachedra arenosella* s.l. E.** Recorded twice, once in January 2017 and once in December 2024. More than one species is confused under this name, Walker's type specimens are lost and the taxonomy has yet to be resolved.
***Batrachedra psithyra* E**. Very common amongst mātātā fern (*Histiopteris incisa*) in late spring through early summer. This is a likely larval host.

Stathmopodidae (6 species)
***Stathmopoda aposema* E.** Uncommon, recorded in March 2017.
***Stathmopoda caminora* E.** Recorded once, in October 2024.
***Stathmopoda horticola* E.** Very common, recorded from October to March.

***Stathmopoda skelloni* E.** Recorded twice, once in September and once in April.
***Stathmopoda trimolybdias* E.** Recorded three times, twice in December and once in February.
***Thylacosceles radians* E.** Recorded twice, once in December and once in January.

Pterophoridae (5 species)
***Amblyptilia deprivatalis* E.** Two at m.v. light in Jan 2017: one at AJS's first property and one at the picnic area at lower elevation. See under 'Notable Records' above.
***Amblyptilia falcatalis* E.** Only recorded once in January 2018.
***Amblyptilia repletalis* E.** Very common, recorded from September to February.
***Platyptilia isodactylus* A.** Uncommon, all records in January**.**
***Stenoptilia zophodactylus* N.** Fairly common, recorded from October to April.

Copromorphidae (2 species)
***Isonomeutis amauropa* E.** Recorded regularly in the daytime during November and December.
***Isonomeutis restincta* E.** Recorded on four occasions, in December and January.

Carposinidae (9 species)
***Carposina neurophorella* A.** Recorded twice, once in December and once in January.
***Ctenarchis cramboides* E.** Considered a scarce moth, recorded for the first time in January 2025.
***Glaphyrarcha euthrepta* E.** Another scarcity, recorded twice in October 2016.
***Heterocrossa contactella* E.** Recorded twice, both in November.
***Heterocrossa eriphylla* E.** Common, recorded from October to January.
***Heterocrossa gonosemana* E.** Recorded from January to March.
***Heterocrossa iophaea* E.** Only recorded once; 29 January 2025.
***Heterocrossa philpotti hudsoni* E.** Recorded from June to September.
***Heterocrossa rubophaga* E.** Recorded from October to January and once in June.

Choreutidae (2 species)
***Asterivora combinatana* E.** Recorded once; 12 February 2017.
***Tebenna micalis* N.** Common, recorded from December to March both during the daytime on daisies and at the light trap.

Tortricidae (41 species)
***Argyroploce* (s.l.) *chlorosaris* E.** Common, recorded in October and December.
***Crocidosema plebejana* A.** Recorded for the first time on 8 December 2025.
***Cryptaspasma querula* E.** Very common; can be found throughout the year.
***Cydia succedana* A.** Very common due to predominance of European gorse on the estate.
***Holocola charopa* E.** Only recorded once; 11 July 2022.
***Holocola emplasta* E.** Fairly common, recorded from August to December.

***Holocola parthenia* E.** Common, recorded from July to January.
***Holocola zopherana* E.** Very common, recorded from August to December.
***Strepsicrates ejectana* E.** Common from December to March.
***Apoctena conditana* E.** Recorded twice, both in October.
***Apoctena flavescens* E.** Very common, recorded from August to December.
***Apoctena orthocopa* E.** Very common in December and January.
***Apoctena orthropis* E.** Recorded twice, both in March.
***Apoctena tigris* E.** Fairly common, recorded from December to February.
***Capua intractana* A.** Very common throughout the year.
***Capua* (s.l.) *semiferana* E.** Very common throughout the year.
***Catamacta gavisana* E.** Fairly common from October to May.
***Catamacta alopecana* E.** Recorded twice, once in August and once in February.
***Catamacta lotinana* E.** Uncommon, recorded once in January.
***Clepsis divulsana* A.** Fairly common, recorded from September to March.
***Cnephasia* (s.l.) *incessana* E.** Common, recorded from December to March.
***Cnephasia* (s.l.) *jactatana* E.** Very common throughout the year.
***Ctenopseustis fraterna* E.** Very common, recorded most months of the year.
***Ctenopseustis obliquana* E.** Common from December to May.
***Dipterina imbriferana* E.** Recorded from December to February.
***Ecclitica torogramma* E.** Fairly common, recorded from December to February.
***Epalxiphora axenana* E.** Very common, encountered throughout the year.
***Epiphyas postvittana* A.** Very common throughout the year.
***Lopharcha insolita* E.** Uncommon, recorded in January and March.
***Ochetarcha miraculosa* E.** Scarce, only recorded once in February 2017.
***Ochetarcha* sp. A. E.** Unnamed species recorded once in April 2025.
***Planotortrix notophaea* E.** Common, recorded from December to February.
***Planotortrix excessana* (s.l.) E.** Common most months of the year. (No attempt has been made to distinguish this from *P. octo*, distinct on sex pheromones, and both may occur.)
***Prothelymna niphostrota* E.** Common from August to November.
***Pyrgotis arcuata* E.** Uncommon, recorded singly in November and January.
***Pyrgotis calligypsa* E.** Recorded twice, once in October and once in January.
***Pyrgotis chrysomela* E.** Common from September to April.
***Pyrgotis plagiatana* E.** Very common from September to January.
***Pyrgotis plinthoglypta* E.** Very common from August to February.
***Pyrgotis zygiana* E.** Uncommon, single records in August, November and February.
***Tortrix* (s.l.) *incendiaria* E.** Rare, only recorded once in September 2022.

Pyralidae (8 species)
***Achroia grisella* A.** Recorded on two occasions, in February and April.
***Crocydopora cinigerella* N.** First recorded in April 2025 at moth trap. Most northerly record on iNaturalist and first for the Coromandel. Possibly a migrant

individual.
***Ephestiopsis oenobarella* A.** Recorded in January and February.
***Galleria mellonella* A.** Fairly common from December to April.
***Homoeosoma anaspila* E.** Recorded once, in June 2023.
***Patagoniodes farinaria* N.** Fairly common, all records in January.
***Plodia interpunctella* A.** Two individual adults found in March 2017 in Rat Café.
***Gauna aegusalis* A.** Fairly common, recorded from September to March.

Crambidae (66 species)
***Culladia cuneiferellus* A.** Extremely common, recorded most months of the year.
***Argyria* (s.l.) *strophaea* E.** Fairly common, recorded December to April.
***Gadira acerella* E.** Fairly common, recorded in December and January.
***Glaucocharis auriscriptella* E.** Very common from November to February.
***Glaucocharis chrysochyta* E.** Common from October to February.
***Glaucocharis elaina* E.** Recorded twice, both in November.
***Glaucocharis harmonica* E.** Fairly common, recorded in October and November.
***Glaucocharis holanthes* E.** Fairly common, recorded in November and December.
***Glaucocharis lepidella* E.** Common, recorded from November to February.
***Glaucocharis leucoxantha* E.** Very common, recorded from August to November.
***Glaucocharis metallifera* E.** Only recorded once, on 29 November 2017.
***Glaucocharis parorma* E.** Fairly common, recorded from October to December.
***Glaucocharis pyrsophanes* E.** Fairly common from September to November.
***Glaucocharis selenaea* E.** Common from November to January.
***Orocrambus angustipennis* E.** Uncommon, recorded in December and March.
***Orocrambus apicellus* E.** Common from October to March.
***Orocrambus flexuosellus* E.** Extremely common from spring to autumn.
***Orocrambus ramosellus* E.** Common from October to April.
***Orocrambus vittellus* E.** Very common, encountered most months of the year.
***Trichophysetis* cf. *cretacea* A.** Recorded once on 12 February 2024.
***Hellula hydralis* V.** First recorded in December 2024 followed by another example in February 2025. A rare migrant from Australia, but there were several records in that summer.
***Musotima nitidalis* N.** Common from September to April.
***Hygraula nitens* N.** Common in November and December.
***Clepsicosma iridia* E.** Common from November to May.
***Deana hybreasalis* E.** Common from October to May.
***Diasemia grammalis* E.** Only recorded twice; 1 Feb 2017 and 8 Apr 2023.
***Diplopseustis perieresalis* N.** Very common most months of the year.
***Herpetogramma licarsisalis* A.** Only recorded once, on 19 Mar 2023.
***Proternia philocapna* E.** Common, recorded in December and January.
***Leucinodes cordalis* E.** Only recorded twice; 26 Feb 2017 and 5 Dec 2025.
***Spoladea recurvalis* A.** Recorded for the first time on 18 Apr 2023 and then on two subsequent occasions.

***Udea daiclesalis* E.** Fairly common, recorded from October to February.
***Uresiphita maorialis* E.** Recorded once, on 14 Feb 2024.
***Antiscopa epicomia* E.** Common, recorded from September to April.
***Eudonia aspidota* E.** Recorded commonly in October and November.
***Eudonia asterisca* E.** Fairly common, recorded from October to April.
***Eudonia bisinualis* E.** Very common, recorded in numbers from October to May.
***Eudonia characta* E.** Uncommon, recorded in December and January.
***Eudonia chlamydota* E.** Common from October to April.
***Eudonia choristis* E.** Commonly recorded in November.
***Eudonia colpota* E.** Fairly common from November to January.
***Eudonia dinodes* E.** Common from November to March.
***Eudonia diphtheralis* E.** Very common, recorded from November to April.
***Eudonia dochmia* E.** Uncommon, recorded in October and November.
***Eudonia hemiplaca* E.** Very common, recorded from October to May.
***Eudonia leptalea* E.** Common from November to May.
***Eudonia leucogramma* E.** Only recorded once, on 1 Jan 2018.
***Eudonia minualis* E.** Common from December to April.
***Eudonia octophora* E.** Recorded once, on 14 February 2017.
***Eudonia periphanes* E.** Fairly common, recorded from November to March.
***Eudonia philerga* E.** Commonly recorded from September to December.
***Eudonia pongalis* E.** Common, recorded from November to March.
***Eudonia sabulosella* E.** Common from November to January.
***Eudonia steropaea* E.** Fairly common, recorded from February to April.
***Eudonia submarginalis* E.** Very common from November to March.
***Eudonia trivirgata* E.** Uncommon, recorded twice; 10 Feb 2017 and 24 Sep 2023.
***Eudonia zophochlaena* E.** Fairly common, recorded from November to January.
***Scoparia acharis* E.** Common, recorded from October to February.
***Scoparia* (s.l.) *animosa* E.** Common, recorded from December to February.
***Scoparia chalicodes* E.** Very common, recorded most months of the year excluding mid-winter.
***Scoparia* (s.l.) *illota* E.** Uncommon, recorded twice; February 2023 and February 2024.
***Scoparia* (s.l.) *indistinctalis* E.** Very common, recorded in reasonable number throughout the year.
***Scoparia* (s.l.) *minusculalis* E.** Very common, recorded from October to May.
***Scoparia* (s.l.) *phalerias* E.** Uncommon, recorded twice in February 2017 and twice in December 2024.
***Scoparia ustimacula* E.** Very common, recorded in most months of the year except mid-winter.

Sphingidae (1 species)
***Hippotion scrofa* V.** First recorded in February 2025, when new to New Zealand; see above, under ‘Notable Records’.

Geometridae (67 species)
***Chalastra aristarcha* E.** Common, recorded from September to May.
***Chalastra pellurgata* E.** Common, recorded from September to May.
***Cleora scriptaria* E.** Very common, recorded most months of the year.
***Gellonia dejectaria* E.** Very common, recorded from October to May.
***Gellonia pannularia* E.** Common, records commence in December through to May.
***Declana floccosa* E.** Abundant, can be attracted to light throughout the year.
***Ipana atronivea* E.** Very common and a real stunner. Can be encountered all year round.
***Ipana hermione* E.** Very common, recorded from July to November.
***Ipana junctilinea* E.** Recorded once, on 27 October 2016.
***Ipana leptomera* E.** Very common, recorded most months of the year.
***Ischalis gallaria* E.** Common, recorded from October to May.
***Ischalis nelsonaria* E.** Fairly common, recorded from September to May.
***Ischalis variabilis* E.** Very common, recorded from September to June.
***Pseudocoremia fenerata* E.** Fairly common, recorded from October to June.
***Pseudocoremia leucelaea* E.** Very common from September to June.
***Pseudocoremia monacha* E.** Fairly common in spring and through summer.
***Pseudocoremia productata* E.** Very common in summer and recorded all year round.
***Pseudocoremia rudisata rudisata* E.** Very common from October to June.
***Pseudocoremia suavis* E.** Very common, recorded all year round across the estate.
***Sarisa muriferata* E.** Very common, recorded from September to June.
***Sestra flexata* E.** Common from October to May.
***Sestra humeraria* E.** Uncommon, recorded spasmodically from September to July.
***Anachloris subochraria* N.** Recorded twice, on 1 Feb 2017 and 24 Sep 2017.
***Asaphodes beata* E.** Fairly common, recorded from September to December.
***Asaphodes chlamydota* E.** Common during the summer months.
***Asaphodes limonodes* E.** Two records, both in February 2017.
***Austrocidaria bipartita* E.** Common most months of the year.
***Austrocidaria gobiata* E.** Common from September to December.
***Austrocidaria similata* E.** Very common, recorded most months except mid-winter.
***Chloroclystis* (s.l.) *filata* A.** Common most months apart from mid-winter.
***Elvia glaucata* E.** Fairly common from October to June.
***Epicyme rubropunctaria* N.** Recorded twice, 21 Dec 2023 and 20 Dec 2024.
***Epiphryne verriculata* E.** Uncommon, singular records in November, December and April.
***Epyaxa lucidata* E.** Common, recorded most months.
***Epyaxa rosearia* E.** Common, recorded from September to January.
***Helastia cinerearia* E.** Common from October to May.
***Helastia cymozeucta* E.** Fairly common, recorded from October to December.

***Helastia mutabilis* E.** Fairly common throughout spring and summer months.
***Helastia semisignata* E.** Common, recorded from September to April.
***Homodotis megaspilata* E.** Common most months of the year.
***Hydriomena* (s.l.) *deltoidata* E.** Fairly common, recorded in December and January.
***Hydriomena* (s.l.) *hemizona* s.l. E.** Uncommon, all records in November. Two species may be confused under this name, in which case this is the unnamed one.
***Hydriomena* (s.l.) *rixata* E.** Fairly common, recorded from September to February.
***Microdes epicryptis* E.** Fairly common, recorded from September to January.
***Microdes quadristrigata* E.** Recorded on 5 Feb 2017 and 18 Feb 2025.
***Pasiphila bilineolata* E.** Common, recorded from September to January.
***Pasiphila inductata* E.** Abundant, recorded every month.
***Pasiphila lunata* E.** Recorded once, on 24 Sep 2017.
***Pasiphila melochlora* E.** Uncommon, recorded once on 18 Apr 2023.
***Pasiphila plinthina* E.** Fairly common, recorded in April and July.
***Pasiphila semochlora* E.** Uncommon, recorded in October and April.
***Pasiphila sphragitis* E.** Common from October to July.
***Pasiphila testulata* N.** Very common, recorded from November to March.
***Pasiphila* sp. cf. *magnimaculata* E.** Unnamed pug whose larva feeds on *Brachyglottis kirkii* flowers. First recorded in August 2016 then regularly from August to October.
***Phrissogonus laticostata* A.** Common most months of the year.
***Poecilasthena pulchraria* N.** Abundant all year round.
***Poecilasthena schistaria* E.** Very common all year round.
***Tatosoma agrionata* E.** First recorded in October 2022, by far the most northerly record; subsequently recorded on four more occasions through to January. Larvae are mistletoe feeders.
***Tatosoma apicipallida* E.** First recorded on 11 Oct 2016, followed by occasional observations through spring. At the very north of its range.
***Tatosoma lestevata* E.** Fairly common, recorded on a couple of occasions in October and December.
***Tatosoma tipulata* E.** Very common, found most months except mid-winter.
***Tatosoma topea* E.** Fairly common, recorded from September to December.
***Tatosoma transitaria* E.** Fairly common, recorded from October to June.
***Xyridacma alectoraria* E.** Common, recorded from October to January.
***Xyridacma ustaria* E.** Common, recorded most months of the year.
***Cyclophora obstataria* A.** Recorded once, on 18 Apr 2023.
***Scopula rubraria* N.** Abundant from February until April, mainly during the day but occasionally at light.

Erebidae (10 species)
***Dasypodia cymatodes* A.** Common from late summer through autumn.

***Hypocala deflorata* V.** First recorded in January 2018, subsequently in February and March 2023 and then February 2026.
***Nyctemera amicus* A.** Both true *N. amicus* (Australian) and the hybrid with the endemic *N. annulata* seem to occur at Mahakirau, based on wing pattern elements of adults, as compared with vouchers in NZAC. Further work on these species and their hybridisation is currently being conducted by W.T. Frost (Lincoln University).
Nyctemera annulata x amicus.
***Pantydia sparsa* A.** Very common at the moth trap, particularly late summer/early autumn.
***Rhapsa scotosialis* E.** Very common all year round.
***Schrankia costaestrigalis* N.** Can be found commonly throughout the year.
***Trigonistis anticlina* E.** Common, recorded from October to December.
***Utetheisa lotrix lotrix* V.** Recorded once, in April 2023.
***Utetheisa pulchelloides vaga* V.** First recorded at light in March 2023 then subsequently in January 2024.

Noctuidae (46 species)
***Bityla defigurata* E.** Very common from January to April.
***Helicoverpa armigera conferta* A.** Very common from January to April.
***Helicoverpa punctigera* V.** First recorded in October 2023 then February 2024.
***Austramathes purpurea* E.** Common, recorded from spring through to late summer.
***Cosmodes elegans* A.** Regularly attracted to light from September to March. Usually an autumn immigrant from Australia.
***Proteuxoa tetronycha* E.** Very common at light from October to end of summer.
***Peripyra sanguinipuncta* A.** Very common from January to early autumn.
***Physetica prionistis* E.** Only recorded twice; November and January. A rarity this far north (Hoare 2019).
***Physetica sequens* E.** Recorded once on 27 January 2026.
***Ichneutica arotis* E.** Uncommon; both recorded in October.
***Ichneutica atristriga* E.** Very common throughout the summer.
***Ichneutica brunneosa* E.** First recorded in October 2016 and then on 6 further occasions throughout summer months.
***Ichneutica chlorodonta* E.** Common, can be found throughout the year.
***Ichneutica inscripta* E.** Two recorded; October and November.
***Ichneutica insignis* E.** Abundant in summer, recorded all year round.
***Ichneutica lignana* E.** Very common throughout the year.
***Ichneutica mustulenta* E.** Fairly common from January to March.
***Ichneutica plena* E.** Very common, recorded throughout the year.
***Ichneutica mutans* E.** Abundant in summer, recorded all year round.
***Ichneutica purdii* E.** First recorded at light in February 2016 and then December 2024 but not a common moth.

***Ichneutica semivittata* E.** Common from September to February.
***Ichneutica steropastis* E.** Common from September to March.
***Ichneutica subcyprea* E.** This recently named species was formerly confused with *I. chlorodonta*; the differences are pointed out by Hoare (2019). A further example was recorded in September 2023.
***Ichneutica sulcana* E.** Common across the summer months.
***Ichneutica ustistriga* E.** Very common and can be found all year round.
***Feredayia graminosa* E.** Abundant in summer, recorded all year round.
***Meterana* n. sp. nr *asterope* E.** First recorded on 5 November 2023 then 24 October 2025. Unnamed species near *M. asterope*, sparsely recorded through the North Island.
***Meterana alcyone* E.** Recorded for the first time in December 2025.
***Meterana coeleno* E.** Recorded from August to October.
***Meterana decorata* E.** First record from November 2023, now regularly encountered.
***Meterana diatmeta* E.** Uncommon, recorded from October to December.
***Meterana stipata* E.** Found from September to January but not in large numbers.
***Meterana vitiosa* E.** Common from autumn until spring.
***Persectania aversa* E.** First recorded in April 2017, then twice more in October and February.
***Mythimna separata* N.** Common, recorded all year round.
***Leucania stenographa* A.** Fairly common, recorded in April and May.
***Athetis tenuis* A.** Fairly common, can be found from December to May.
***Spodoptera litura* A.** Abundant from late summer to autumn.
***Agrotis ipsilon* N.** Abundant from late summer to autumn.
***Agrotis munda* A.** First and only record in December 2024.
***Diarsia intermixta* N.** Fairly common throughout the summer months.
***Chrysodeixis argentifera* A.** Occasional migrant first recorded in December 2016.
***Chrysodeixis eriosoma* N.** Common across the summer to early autumn.
***Ctenoplusia albostriata* A.** Fairly common from March to May.
***Ctenoplusia limbirena* A.** Very common from January to June.
***Thysanoplusia orichalcea* A.** Fairly common from January through to May.

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