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# Faunal make-up of moths in Tomakomai Experiment Forest, Hokkaido University\*

By

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北海道大学苫小牧演習林における蛾類の種構成\*

吉田国吉\*\*

A light trap survey was carried out to obtain some ecological information on the moths of Tomakomai Experiment Forest, Hokkaido University, at four different vegetational stands from early May to late October in 1978. In a previous paper (YOSHIDA 1980), seasonal fluctuations of the moth community and the predominant species were compared among the four stands. As a second report the present paper deals with some characteristics on the faunal make-up.

Before going further, the author wishes to express his sincere thanks to Mr. Masanori J. TODA and Professor Shōichi F. SAKAGAMI, the Institute of Low Temperature Science, Hokkaido University, for their pertinent guidance throughout the present study and critical reading of the manuscript. Cordial thanks are also due to Dr. Kenkichi ISHIGAKI, Tomakomai Experiment Forest, Hokkaido University, who provided me with facilities for the present study, Dr. Hiroshi INOUE, Otsu Women University and Mr. Satoshi HASHIMOTO, University of Osaka Prefecture, for their kind advice and identification of Geometridae.

## Method

The sampling method, general features of the area surveyed and the flora of sampling sites are referred to the descriptions given previously (YOSHIDA loc. cit.).

## Results and Discussion

The original data combined for all four stands consist of 22,476 individuals of 380 species belonging to 13 families (cf. Appendix). Tiny moths were often considerably damaged in wings by the disturbance in trap chamber after trapped. So, in the present study Acontiinae, Hypeninae and Herminiinae in Noctuidae, Pyralididae and Microlepidoptera were omitted from the subject owing to difficulties of identification. As the number of sampling nights varied from one to five among sampling periods (cf. Appendix), the relative percentages can not be compared

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**Table 1.** The numbers of species and individuals of 13 moth families collected in Tomakomai Experiment Forest in 1978, separately shown for each relative abundance rank.

Family Subfamily (Abbr.)	Abundant spp.		Common spp.		Rare spp.		Total	
	Spp. No. (%)	Ind. No. (%)	Spp. No. (%)	Ind. No. (%)	Spp. No. (%)	Ind. No. (%)	Spp. No. (%)	Ind. No. (%)
SPHINGIDAE (SP)	4 (1.1)	568.3 (5.2)	1 (0.3)	20.8 (0.2)	5 (1.3)	7.5 (0.1)	10 (2.6)	596.6 (5.4)
SATURNIIDAE (SA)	3 (0.8)	1,020.1 (9.3)	1 (0.3)	38.5 (0.4)	2 (0.5)	2.0 (—)	6 (1.6)	1,060.6 (9.6)
ARCTIIDAE (AR)	8 (2.1)	1,806.5 (16.4)	3 (0.8)	73.8 (0.7)	6 (1.6)	17.5 (0.2)	17 (4.5)	1,897.8 (17.3)
Lithosiinae (Li)	6 (1.6)	1,527.5 (13.9)	2 (0.5)	39.0 (0.4)	2 (0.5)	9.8 (0.1)	10 (2.6)	1,576.3 (14.3)
Arctiinae (Ac)	2 (0.5)	279.0 (2.5)	1 (0.3)	34.8 (0.3)	4 (1.1)	7.7 (0.1)	7 (1.8)	321.5 (2.9)
BRAHMAEIDAE (BA)			1 (0.3)	34.1 (0.3)			1 (0.3)	34.1 (0.3)
NOCTUIDAE (NO)	8 (2.1)	1,224.4 (11.1)	23 (6.1)	578.5 (5.3)	110 (28.9)	399.4 (3.6)	141 (37.1)	2,202.3 (20.0)
Pantheinae (Pa)					1 (0.3)	1.5 (—)	1 (0.3)	1.5 (—)
Apatelinae (Ap)	2 (0.5)	304.8 (2.8)	2 (0.5)	67.5 (0.6)	5 (1.3)	16.8 (0.2)	9 (2.4)	389.1 (3.5)
Cryphiinae (Cr)					1 (0.3)	0.3 (—)	1 (0.3)	0.3 (—)
Noctuinae (NO)	3 (0.8)	694.2 (6.3)	3 (0.8)	59.9 (0.5)	13 (3.4)	58.8 (0.5)	19 (5.0)	812.9 (7.4)
Hadeninae (Ha)	2 (0.5)	137.2 (1.2)	2 (0.5)	71.0 (0.6)	13 (3.4)	54.8 (0.5)	17 (4.5)	263.0 (2.4)
Cucullinae (Cu)			4 (1.1)	97.5 (0.9)	12 (3.2)	38.7 (0.4)	16 (4.2)	136.2 (1.2)
Amphipyridae (Am)	1 (0.3)	88.2 (0.8)	5 (1.3)	129.1 (1.2)	34 (8.9)	128.4 (1.2)	40 (10.5)	345.7 (3.1)
Euteliinae (Eu)					1 (0.3)	0.5 (—)	1 (0.3)	0.5 (—)
Nycteolinae (Ny)			2 (0.5)	41.6 (0.4)	3 (0.8)	22.4 (0.2)	5 (1.3)	64.0 (0.5)
Plusiinae (Pl)					8 (2.1)	12.3 (0.1)	8 (2.1)	12.3 (0.1)
Catocalinae (Ca)			5 (1.3)	111.9 (1.0)	19 (5.0)	64.9 (0.6)	24 (6.3)	176.8 (1.6)
NOTODONTIDAE (NT)	4 (1.1)	715.1 (6.5)	9 (2.4)	301.7 (2.7)	27 (7.1)	173.9 (1.6)	40 (10.5)	1,190.7 (10.8)
LYMANTRIIDAE (LY)	1 (0.3)	80.5 (0.7)	1 (0.3)	23.9 (0.2)	13 (3.4)	63.1 (0.6)	15 (3.9)	167.5 (1.5)
LASIOCAMPIDAE (LA)	1 (0.3)	82.1 (0.7)	3 (0.8)	60.7 (0.5)	6 (1.6)	16.6 (0.2)	10 (2.6)	159.4 (1.4)
BOMBYCIDAE (BO)			1 (0.3)	18.9 (0.2)	1 (0.3)	11.8 (0.1)	2 (0.5)	30.7 (0.3)
THYATIRIDAE (TH)	1 (0.3)	75.5 (0.7)			10 (2.6)	34.2 (0.3)	11 (2.9)	109.7 (1.0)
DREPANIDAE (DR)			3 (0.8)	127.0 (1.2)	5 (1.3)	32.5 (0.3)	8 (2.1)	159.5 (1.5)

Table 1. (Continued)

Family Subfamily (Abbr.)	Abundant spp.		Common spp.		Rare spp.		Total	
	Spp. No. (%)	Ind. No. (%)	Spp. No. (%)	Ind. No. (%)	Spp. No. (%)	Ind. No. (%)	Spp. No. (%)	Ind. No. (%)
GEOMETRIDAE (GE)	14 (3.7)	2,211.6 (20.1)	26 (6.8)	747.0 (6.8)	76 (20.0)	406.7 (3.7)	116 (30.5)	3,365.3 (30.6)
Geometrinae (Go)	2 (0.5)	459.0 (4.2)	1 (0.3)	19.3 (0.2)	6 (1.6)	25.7 (0.2)	9 (2.4)	504.0 (4.6)
Sterrhinae (St)					1 (0.3)	0.9 (—)	1 (0.3)	0.9 (—)
Laretiinae (La)	1 (0.3)	59.8 (0.5)	10 (2.6)	298.5 (2.7)	26 (6.8)	113.4 (1.0)	37 (9.7)	471.7 (4.3)
Ennominae (En)	11 (2.9)	1,692.8 (15.4)	15 (3.9)	429.2 (3.9)	43 (11.3)	266.7 (2.4)	69 (18.2)	2,388.7 (21.7)
HETEROGENEIDAE (HE)					3 (0.8)	21.1 (0.2)	3 (0.8)	21.1 (0.2)
TOTAL SPP. NO.	44		72		264		380	
%	11.6		18.9		69.5		100.0	
TOTAL IND. NO.		7,784.1		2,024.9		1,186.3		10,995.3
%		70.8		18.4		10.8		100.0

among the species with different phenologies. To overcome this defect the daily mean values were calculated for each sampling period and summed up throughout the whole season. In the subsequent pages the names of families and subfamilies are abbreviated as shown in Table 1.

### 1. Characteristics at family level

The total numbers of species and individuals of the 13 families are shown in the last column of table 1, together with relative percentages in parentheses. In species number, NO (141 spp., 37.1%, dominated by Am, 40 spp., 10.5%) was ranked the top, followed by GE (116 spp., 30.5%, dominated by En, 69 spp., 18.2%) and NT (40 spp., 10.5%). These three families occupied 78.1% of the total in combination. In general, the percentage ratios and the order of species numbers are consistent with the results given previously (YOSHIDA 1976). In individual number, however, one of the three leading families, the third ranked NT was replaced by AR, and the rank order changed as follows: GE (3,365.3 specimens, 30.6%), NO (2,202.3, 20.0%) and AR (1,897.8, 17.3%), occupying about 68% of the total in combination.

### 2. Relative abundance in terms of individual number

As pointed out by SOUTHWOOD (1978) and many other authors, the samples obtained by light trap collections do not always reflect the real relative abundances of component species in natural community. Nevertheless, the sample data can be used, to some degree, to evaluate the real relative abundance (TODA, pers. comm.). The 90% confidence limits of relative percentage are given by the SAKUMA's (1964) formula:

$$\text{lower limit} = \frac{n_2}{n_1 F_{n_2}^{n_1} \left( \frac{\alpha}{2} \right) + n_2},$$

$$n_1 = 2(N - x + 1), \quad n_2 = 2x,$$

$$\text{upper limit} = \frac{m_1 F_{m_2}^{m_1} \left( \frac{\alpha}{2} \right)}{m_1 F_{m_2}^{m_1} \left( \frac{\alpha}{2} \right) + m_2},$$

$$m_1 = 2(x + 1), \quad m_2 = 2(N - x),$$

where  $N$  is the total number of individuals in each sample,  $x$  is the total number of specimens of each species, and  $F_{n_2}^{n_1} \left( \frac{\alpha}{2} \right)$ ,  $F_{m_2}^{m_1} \left( \frac{\alpha}{2} \right)$  is obtained from  $F$ -distribution table at the degree of freedom  $n_1$  and  $n_2$ ,  $m_1$  and  $m_2$ . In comparison between the percentage range of each species and the mean occurrence probability ( $=100 \times$  reciprocal of the total species number), all component species were classified into three categories in relative abundance, abundant: the lower limit of the former exceeding the latter, common: the former including the latter, and rare: opposite to the case of "abundant".

The results are summarized in Table 1. Forty four species were regarded abundant, corresponding to 11.6% of the total species number and occupying 70.8% of the total individual number, 72 species common (18.9% and 18.4%) and 264 rare (69.5% and 10.8%). The present result also agrees with the general rule of the species abundance relationship in biotic assemblages mentioned by PIELOU (1977): "Roughly speaking, one often finds many rare species and a few abundant ones, although, of course, in terms of number of individuals those of the few common species far outnumber those of the many rare species." In comparison of species numbers of each relative abundance rank among families, GE included more abundant species (14 spp.) than NO (8 spp.), and AR (8 spp.) more than NT (4 spp.), while opposite, GE (76 spp.) to NO (110 spp.) and AR (6 spp.) to NT (27 spp.), in the number of rare species. This difference is reflected in the rank orders of these families different between in numbers of species and individuals. In Fig. 1 the 44 abundant species are arranged in the descending order of relative percentage. The confidence intervals of two successive species overlap with one another throughout the whole sequence, indicating not distinct predominance of particular species but the tendency of serial occurrence.

### 3. Estimation of the total number of species at each stand

In order to estimate the total number of species inhabiting the area on which the effect of a light trap at each stand attains, the fitness to the PRESTON'S (1948) log normal model was tested for each of eight samples obtained at different traps, according to the procedure developed by NAGASAWA (1969). The numbers of individuals were grouped by the method of "standardization of octave" (SHINOZAKI 1958) instead of "PRESTON'S octave method".

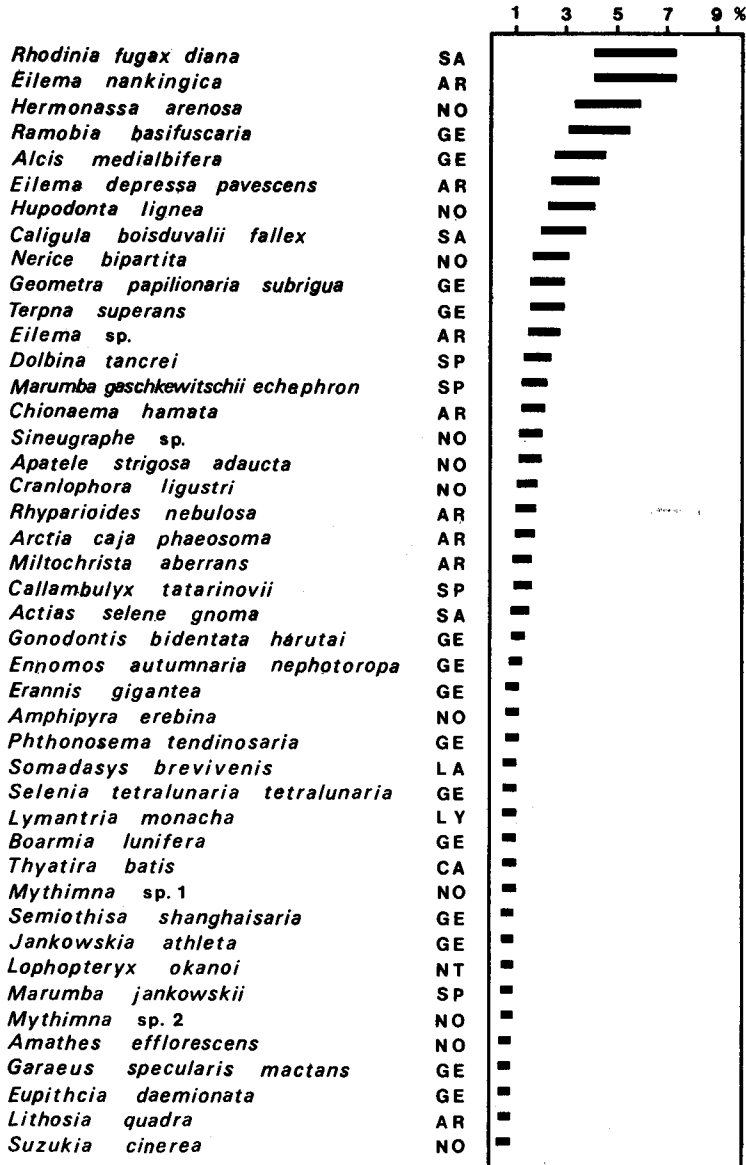


Fig. 1. The occurrence probabilities of 44 abundant species.

In Fig. 2 the observed species frequencies are shown with histograms, in comparison with the values expected in the log normal model. Applying  $\chi^2$ -test, four data obtained from inside and edge of natural and secondary forests fitted favourably to the model, but the other four from inside and edge of white fir and larch afforestations did not. The estimations of the total number of species and of uncollected ones are given for the four fitted data in Table 2. Each sample was estimated covering 50 to 60% of the whole community in species number. It can be said that the values estimated are unexpectedly uniform among the four trap

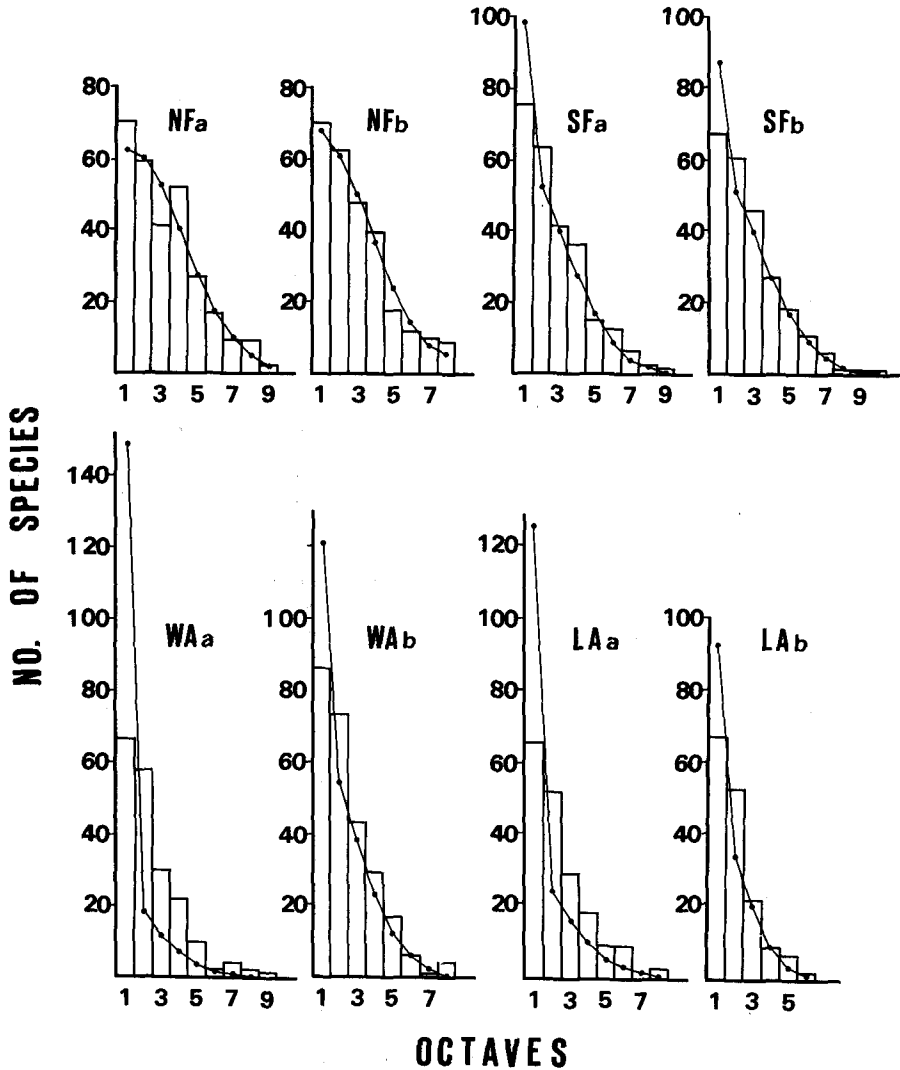


Fig. 2. Fitness to the PRESTON's log normal model for eight samples obtained from NF: natural forest inside<sup>(a)</sup> and edge,<sup>(b)</sup> SF: secondary forest inside<sup>(a)</sup> and edge,<sup>(b)</sup> WA: white fir afforestation inside<sup>(a)</sup> and edge,<sup>(b)</sup> and LA: larch afforestation inside<sup>(a)</sup> and edge.<sup>(b)</sup> Histogram: observed, Black paint: expected.

Table 2. Estimation of the total number of moth species inhabiting natural and secondary forests at Tomakomai Experiment Forest, according to the PRESTON's log normal model.

Stand		Fitness to the model $P(\chi^2)$	Estimated total No. species	Observed total species No. (%)	Estimated uncollected species No.
Natural forest	Inside	0.23	480.6	284.4 (59.2)	196.2
	Edge	0.58	531.8	270.0 (50.8)	261.8
Secondary forest	Inside	0.07	467.4	251.5 (53.8)	215.9
	Edge	0.14	450.1	239.3 (53.2)	210.8

sites, especially at the two sites of secondary forest. The estimation of total species number at secondary forest edge, 450.1 spp., is surprisingly consistent with an actual record (YOSHIDA 1976), about 420 spp. omitting the species of Amatidae, Agaristidae, Acontiinae, Hypheninae, Zygaenidae, Pyralididae and Pterophoridae which are also excluded from the data in the present study. The latter was obtained from the collections made at a definite point of secondary forest edge, though different from that in the present study, continuously throughout the whole moth season, May to October, for three years. On the other hand, the value at natural forest inside must be underestimated, because more species have been actually recorded there by the collections having continued since 1978.

Neither the data combined for the four fitted samples nor those for all eight ones fitted to the log normal model. That suggests the inadequacy of sampling sites in comparison to the variety of environments covered by the whole community concerned, if assuming that the whole community follows the log normal model as postulated on various moth communities so far studied (WILLIAMS 1953, ITO et al. 1974).

#### 4. *The problem of unfitness to the log normal model for data obtained from afforestation*

Concerning the relationship between numbers of species and individuals in a community, several mathematical laws other than the PRESTON's log normal one have been postulated, e.g., MOTOMURA's geometri series (1932), FISHER's logarithm series (1943) and MACARTHUR's broken stick model (1957, 1960). However, the data obtained from four traps at afforestations, shown in Fig. 3 by plotting the logarithm of relative abundance in ordinate against the abundance order in abscissa, fitted statistically neither to the PRESTON's model as mentioned above nor to any others so far postulated. That suggests the samples composed of heterogeneous components respectively following different laws. In consideration of the artificial pure vegetations at the two stands almost monopolized by afforested plants, white fir and larch, respectively, the species depending on these two as food plants were selected and marked in Fig. 3. At a glance, it is noticeable that those occupy higher ranks in the abundance order and are likely arranged in linear, suggesting the fitness to the MOTOMURA's geometric series, though denied statistically by  $\chi^2$ -tests for all four cases. The other subsamples remained after excluding the species mentioned above, which are considered to be composed of the species depending on floor plants of afforestations and/or immigrants from surrounding area, fitted to the PRESTON's model (Fig. 4), except that at larch forest edge. The unfitness of the last may be attributed to the ineffective sampling there as pointed out in the previous paper (YOSHIDA 1980). In conclusion, the moth community in afforestation is made up of two different components. One is a group of species with identical resource requirements on a single niche dimension, food in the present case, and the other of those following the PRESTON's model as well as in the communities of deciduous broad-leaved forests. The species of the first group share the common resource among each other according to the niche pre-emption mechanism as reflected in the fitness to the MOTOMURA's geometric series.



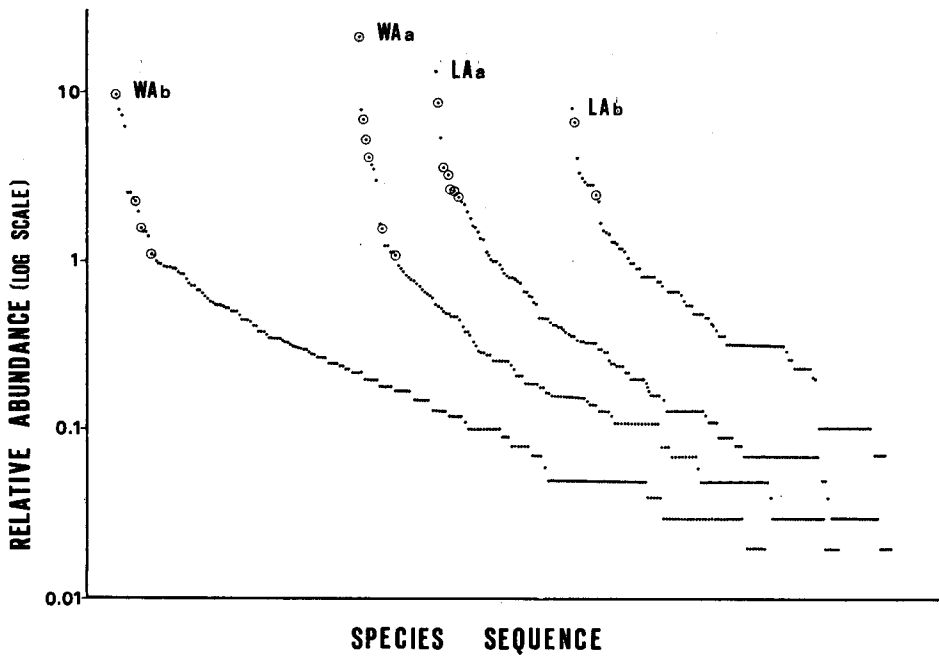


Fig. 3. Species abundance curves for the data obtained from white fir and larch afforestations.

⊙: Species depending on white fir and larch as food plants.

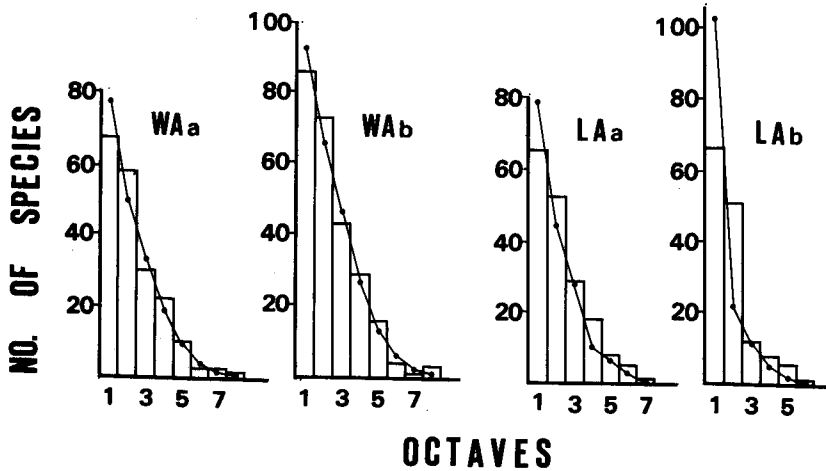


Fig. 4. Fitness to the PRESTON's log normal model for the afforestation subsamples. The data of species depending on white fir or larch as food plants are excluded.

### Summary

Several characteristics of the moth fauna in Tomakomai Experiment Forest, Hokkaido University, were examined based on the samples obtained at four different vegetational stands from early May to late October in 1978, consisting 22,476 individuals of 380 species belonging to 13 families.

1) At family level, Noctuidae, Geometridae and Notodontidae were high-ranked in species number, while Geometridae, Noctuidae and Arctiidae in individual number.

2) Component species were roughly classified into three categories in relative abundance, 44 spp. abundant (corresponding to 11.6% and occupying 70.8% of the total individual number), 72 spp. common (18.9%, 18.4%) and 264 spp. rare (69.5%, 10.8%).

3) From the sequential overlap of relative percentage confidence intervals among 44 abundant species, the tendency of serial occurrence was suggested rather than the distinct predominance by particular species.

4) From the good fitness to the PRESTON's log normal model for data from natural and secondary forests, the total species numbers inhabiting there were estimated to be about 450 to 550.

5) As for the data from afforestations, it was concluded that there the moth communities are composed of two different components, one depending on the afforested plants as food and following the MOTOMURA's geometric series model, while the other depending on other floor plants and/or immigrating from surrounding area and following the PRESTON's model as well as in the communities of broad-leaved forests.

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### 摘 要

1978年5月初旬から10月下旬までに異なる4林相から採集された、13科に属する380種22,476個体の蛾類をもとに、北海道大学苫小牧演習林の蛾類相の特性が調査された。

- 1) 科単位において、種数ではヤガ科、ジャクガ科、シャチホコガ科が、個体数ではジャクガ科、ヤガ科、ヒトリガ科がそれぞれに上位を占めた。
- 2) 構成種は相対頻度において、次のような3つのグループに分類された。つまり、44種(全種数の11.6%、全個体数の70.8%)の優占種、72種(18.9%、18.4%)の普通種、264種(69.5%、10.8%)の小数種からなっていた。
- 3) 44優占種間で、相対値の信頼度区間が重なっていることから、特定の種のきわだった優占性というよりは連続的な出現の傾向が示された。
- 4) 天然林、二次林のデータがPRESTONの対数正規則によく適合したことから、その森林に生息する蛾類の全種数はおよそ450種から550種と見積られた。
- 5) 人工林は2つの全く異なる蛾類群集から構成されているものと結論づけられた。すなわち一つは元村の等比級数則にしたがい、食性の上で針葉樹に依存している蛾類群集であり、もう一つは広葉樹林の群集と同様、PRESTONの対数正規則にしたがい、人工林の林床植物に依存しているか、もしくは周辺の地域から移入してきた群集である。

### Appendix

List of moth species collected at Tomakomai Experiment Forest in 1978.

1) In each species, the total number of individuals (total number = ♂ + ♀) is given after the scientific name, followed by detail information for sampling sites and sampling periods in parentheses.

2) Trap sites and sampling periods are shown with following symbols.

Trap sites NFa: natural forest inside, NFb: ditto edge, SFa: secondary forest inside, SFb: ditto edge, WAa: white fir afforestation inside, WAb: ditto edge, LAa: larch afforestation inside, LAb: ditto edge.

Sampling periods A: May 6-8, B: May 13-17, C: May 27, D: June 4-8, E: June 14-15, F: July 10-11, G: July 25-27, H: August 2, I: August 11-12, J: August 24-26, K: September 4-5, L: September 9-10, M: September 23-25, N: October 1-2, O: October 9-10, P: October 23-24.

3) Abundant species are marked with \*\* given before the scientific name, common ones with \* and rare ones non-marked.

#### Family SPHINGIDAE

1. *Meganoton scribae*. 7=7+0 (NFa: G 1=1+0. NFb: G 1=1+0. SFa: F 3=3+0, G 1=1+0. WAb: F 1=1+0.)
- \*\* 2. *Dolbina tancrei*. 332=331+1 (NFa: F 2=2+0, G 2=2+0, H 25=25+0, I 82=82+0, NFb: G 3=3+0, H 32=32+0, I 88=88+0. SFa: F 2=2+0, G 2=2+0, H 4=4+0, I 21=21+0. SFb: D 1=1+0, F 1=1+0, G 42=42+0, I 17=17+0. WAb: I 6=6+0, J 1=0+1. LAa: I 1=1+0.)
- \*\* 3. *Marumba gaschkewitschii echephron*. 349=349+0 (NFa: E 1=1+0, F 71=71+0, G 1=1+0. NFb: F 96=96+0, G 3=3+0, H 2=2+0. SFa: E 9=9+0, F 56=56+0, G 2=2+0. SFb: E 3=3+0, F 36=36+0, G 2=2+0. WAa: F 5=5+0, G 1=1+0. WAb: E 2=2+0, F 49=49+0, G 2=2+0. LAa: F 3=3+0. LAb: F 5=5+0.)
- \*\* 4. *Marumba jankowskii*. 151=151+0 (NFa: D 3=3+0, E 4=4+0, F 31=31+0, G 7=7+0. NFb: D 2=2+0, E 5=5+0, F 25=25+0, G 10=10+0. SFa: D 1=1+0, E 5=5+0, F 17=17+0, G 2=2+0. SFb: D 3=3+0, E 7=7+0, F 6=6+0. WAb: D 2=2+0, E 1=1+0, F 14=14+0, G 4=4+0. LAa: F 1=1+0. LAb: F 1=1+0.)
- \* 5. *Marumba sperchius sperchius*. 42=42+0 (NFa: F 25=25+0. NFb: F 13=13+0, G 1=1+0. SFa: F 2=2+0. SFb: F 1=1+0.)
6. *Mimas tiliae christophi*. 1=1+0 (NFb: G 1=1+0.)
- \*\* 7. *Callambulyx tatarinovii*. 259=259+0 (NFa: F 57=57+0, G 1=1+0. NFb: F 139=139+0, H 1=1+0, J 1=1+0. SFa: F 23=23+0. SFb: F 21=21+0. WAa: F 1=1+0. WAb: F 8=8+0, G 1=1+0, H 1=1+0. LAb: F 5=5+0.)

8. *Amorpha amurensis*. 1=1+0 (NFb: G 1=1+0.)  
 9. *Phillosphingia dissimilis*. 1=1+0 (WAa: F 1=1+0.)  
 10. *Ampelophaga rubiginosa*. 6=6+0 (NFa: H 1=1+0. NFb: F 5=5+0.)

### Family SATURNIIDAE

- \*\* 11. *Rhodinia fugax diana*. 1,205=899+406 (NFa: M 1=1+0, N 11=3+8. NFb: M 1=0+1, N 5=0+5. SFa: M 3=1+2, N 634=478+156, O 15=8+7. SFb: M 2=2+0, N 418=278+140, O 38=18+20. WAa: M 1=0+1, N 21=0+21. WAb: M 2=2+0, N 26=5+21, O 2=2+0. LAa: N 15=0+15, O 2=1+1. LAb: N 7=0+7, O 1=0+1.)  
 \* 12. *Rhodinia jankowskii*. 80=75+5 (NFa: N 12=12+0. NFb: N 17=17+0. SFa: M 3=3+0, N 18=15+3. SFb: N 19=19+0, O 2=2+0. WAb: N 7=7+0. LAa: N 2=0+2.)  
 \*\* 13. *Caligula boisduvalii fallax*. 617=560+57 (NFa: M 2=2+0, N 40=28+12, O 54=54+0. NFb: M 2=2+0, N 10=8+2, O 46=46+0, P 2=2+0. SFa: M 6=6+0, N 35=23+12, O 50=50+0, P 7=7+0. SFb: M 1=1+0, N 8=7+1, O 15=15+0, P 3=3+0. WAa: M 15=15+0, N 24=17+7, O 30=30+0, P 6=6+0. WAb: M 3=3+0, N 52=47+5, O 64=62+2, P 9=9+0. LAa: M 11=11+0, N 46=38+8, O 23=21+2, P 3=3+0. LAb: M 1=1+0, N 28=25+3, O 19=16+3, P 2=2+0.)  
 14. *Dictyoploca japonica*. 1=1+0 (NFa: J 1=1+0.)  
 15. *Aglia tau microtau*. 3=2+1 (NFa: E 1=1+0. WAb: F 2=1+1.)  
 \*\* 16. *Actias artemis aliena*. 263=261+2 (NFa: D 5=5+0, E 13=13+0, F 63=63+0, G 5=5+0. NFb: D 7=7+0, E 12=12+0, F 62=62+0, G 3=3+0, I 1=0+1. SFa: D 6=6+0, E 29=29+0, F 18=18+0, G 1=1+0. SFb: D 6=6+0, E 11=11+0, F 9=9+0. WAa: D 1=1+0. WAb: D 1=1+0, E 3=3+0, F 3=2+1, G 4=4+0.)

### Family BRAHMAEIDAE

- \* 17. *Brahmaea wallichii japonica*. 78=78+0 (NFa: D 4=4+0. NFb: B 3=3+0, C 2=2+0, D 6=6+0. SFa: C 2=2+0, D 3=3+0. SFb: C 2=2+0, D 2=2+0. WAa: C 11=11+0, D 25=25+0. WAb: C 2=2+0, D 8=8+0. LAa: C 4=4+0, D 2=2+0. LAb: D 2=2+0.)

### Family ARCTIIDAE

#### Subfamily Lithosiinae

- \* 18. *Pelosia ramosula ramosula*. 35=32+3 (NFa: F 1=1+0, G 9=9+0, H 2=2+0, I 13=11+2. NFb: I 5=5+0. SFb: H 3=2+1, I 2=2+0.)  
 \*\* 19. *Eilema depressa pavescens*. 556=146+410 (NFa: F 2=2+0, H 70=19+51, I 44=17+27. NFb: F 6=5+1 H 25=9+16, I 95=39+56.)

- SFa: H 4=0+4, I 1=1+0. SFb: G 2=1+1, H 13=10+3, I 5=4+1. WAa: G 8=2+6, H 11=2+8, I 45=5+40. WAb: G 3=2+1, I 9=3+6. LAa: G 40=14+26, H 29=2+27, I 125=4+121. LAb: G 3=3+0, I 16=1+15.)
- \*\* 20. *Eilema nankingica*. 1,275=794+481 (NFa: F 5=1+4, G 123=48+75, H 26=10+16, I 5=4+1. NFb: F 5=5+0, G 46=23+23, H 59=29+30, I 6=3+3. SFa: F 2=2+0, G 69=52+17, H 25=13+12, I 1=1+0. SFb: F 514=402+112, G 234=135+108, H 6=3+3. WAa: G 15=3+12, H 7=3+4. WAb: G 29=12+17. LAa: G 47=20+27, H 2=2+0, I 2=1+1. LAb: G 38+22+16.)
- \*\* 21. *Eilema griseola aegrota*. 385=158+227 (NFa: F 2=2+0, G 48=25+23, H 36=16+20, I 42=8+34, J 1=0+1. NFb: F 14=6+8, G 31=18+13, H 16=7+9, I 62=21+41, J 3=1+2. SFa: F 5=2+3, G 4=4+0. SFb: F 1=1+0, G 28=19+9, H 17=8+9, I 24=11+13. WAa: F 2=1+1, G 12=3+9, H 5=1+4, I 1=0+1. WAb: F 3=3+0, G 11=0+11, I 3=0+3. LAa: G 3=0+3, H 4=0+4, I 3=1+2. LAb: G 4=0+4.)
22. *Eilema cribrata*. 5=4+1 (NFa: I 2=1+1. NFb: I 2=2+0. WAb: I 1=1+0.)
- \* 23. *Lithosia quadra*. 148=85+63 (NFa: G 17=14+3, H 4=1+3. NFb: G 25=18+7, H 9=8+1. SFa: G 6=2+4. SFb: G 28=18+10. WAa: G 8=3+5. WAb: G 16=5+11. LAa: G 28=12+16, H 1=1+0. LAb: G 6=3+3.)
- \*\* 24. *Chionaema hamata*. 398=363+35 (NFa: G 165=163+2, H 30=29+1, I 5=4+1. NFb: G 71=68+3, H 15=0+15, I 3=3+0. SFa: G 22=21+1, H 2=0+2, I 1=0+1. SFb: G 23=23+0, H 6=5+1. WAa: G 13=11+2, I 3=1+2. WAb: G 22=20+2, I 1=0+1. LAa: G 13=12+1, H 3=3+0.)
- \* 25. *Melanaema venata*. 40=7+33 (WAa: F 2=0+2, G 15=3+12, H 8=0+8, I 2=0+2. WAb: F 1=0+1, G 8=4+4. LAa: G 2=0+2. LAb: G 2=0+2.)
- \*\* 26. *Mitochrista aberrans*. 300=141+159 (NFa: F 11=8+3, G 32=6+26, H 6=3+3, I 2=1+1. NFb: F 66=50+16, G 22=16+6, H 3=0+3, I 10=3+7. SFa: F 13=3+10, G 5=1+4, H 2=1+1. SFb: F 8=4+4, G 46=23+23, H 4=3+1, I 1=1+0. WAa: F 1=1+0, G 8=2+6, H 2=1+1. WAb: F 2=1+1, G 22=5+17, I 2=0+2. LAa: G 21=4+17, I 1=1+0. LAb: G 10=3+7.)
27. *Mitochrista calamina*. 14=14+0 (SFb: G 10=10+0, H 4=4+0.)

## Subfamily Arctiinae

28. *Spilarctia lutea japonica*. 9=2+7 (NFa: G 1=0+1. NFb: I 1=1+0. SFa: G 4=0+4, I 2=0+2. LAa: E 1=1+0.)
29. *Spilarctia seriatopunctata*. 2=1+1 (NFb: F 1=1+0. WAb: J 1=0+1.)
30. *Spilarctia obliquizonata*. 1=1+0 (SFa: E 1=1+0.)

- \* 31. *Spilosoma punctaria*. 78=78+0 (NFa: D 8=8+0, E 19=19+0, F 3=3+0. NFb: 4=4+0, E 7=7+0, F 3=3+0. SFa: E 12=12+0. SFb: D 1=1+0, E 11=11+0. WAa: D 1=1+0. WAb: E 9=9+0.)
32. *Spilosoma nivea*. 4=3+1 (NFa: G 1=1+0, H 2=2+0. WAa: H 1=0+1.)
- \*\* 33. *Rhyparioides nebulosa*. 278=274+4 (NFa: G 80=80+0, H 35=35+0, I 5=5+0. NFb: G 70=70+0, H 28=25+3, I 5=5+0. SFa: G 2=2+0, H 6=6+0. SFb: 3=3+0. WAa: G 13=12+1, H 1=1+0, I 2=2+0. WAb: G 17=17+0. LAa: G 7=7+0, H 4=4+0.)
- \*\* 34. *Arctia caja phaeosoma*. 278=262+16 (NFa: J 1=1+0, K 20=20+0, L 36=36+0. NFb: J 9=9+0, K 45=44+1, L 57=50+7. SFa: K 13=13+0, L 27=24+3. SFb: J 6=3+3, K 11=11+0, L 29=27+2. WAa: J 3=3+0, K 2=2+0, L 1=1+0. WAb: J 3=3+0, K 6=6+0, L 6=6+0. LAb: J 3=3+0.)

### Family AGARISTIDAE

35. *Maikona jezoensis*. 1=1+0 (WAb: B 1=1+0.)

### Family NOCTUIDAE

#### Subfamily Pantheinae

36. *Panthea coenobita idae*. 4=2+2 (NFa: L 1=1+0. LAa: G 3=1+2.)

#### Subfamily Apatelinae

37. *Belciades virens*. 11=11+0 (NFa: F 4=4+0, G 2=2+0. NFb: G 2=2+0, I 1=1+0. SFa: F 1=1+0. SFb: E 1=1+0.)
38. *Daseochaeta viridis*. 4=4+0 (WAb: N 1=1+0, O 2=2+0, P 1=1+0.)
- \* 39. *Moma alpium*. 47=46+1 (NFa: F 17=17+0. NFb: F 7=7+0. SFa: E 1=1+0, F 14=13+1 L 1=1+0. SFb: F 5=5+0. WAa: F 1=1+0. WAb: 1=1+0.)
- \* 40. *Apatete rumicis oriens*. 75=38+37 (NFa: F 1=1+0, G 1=1+0, H 2=0+2, I 15=5+10. NFb: G 1=1+0, H 2=0+2, I 19=7+12. SFa: C 1=1+0, G 2=2+0, I 11=6+5. SFb: C 1=1+0, D 2=2+0, E 1=1+0, H 2=2+0, I 7=4+3. WAa: I 1=1+0. WAb: G 1=1+0, H 1=1+0, I 3=0+3. LAb: I 1=1+0.)
41. *Apatete incretata*. 6=6+0 (NFa: G 2=2+0. NFb: G 1=1+0. SFa: G 1=1+0. SFb: J 1=1+0. WAb: G 1=1+0.)
42. *Apatete major*. 9=9+0 (NFa: F 1=1+0, G 2=2+0. NFb: G 2=2+0. SFa: G 1=1+0. SFb: F 2=2+0, G 1=1+0.)
- \*\* 43. *Apatete strigosa adaucta*. 222=124+98 (NFa: G 1=1+0, H 10=5+5, I 17=9+8. NFb: E 1=1+0, F 4=4+0, G 4=4+0, H 8=4+4, I 22=4+18, J 1=1+0. SFa: D 2=2+0, E 2=2+0, G 4=4+0, H 24=12+12, I 22=13+9. SFb: D 2=2+0, E 2=2+0, G 7=6+1, H 24=3+21, I 39=20+19, J 6=6+0. WAa: H 1=1+0. WAb:

- D 1=1+0, G 10=10+0, H 1=1+0, I 4=3+1. LAa: F 1=1+0, G 1=1+0, H 1=1+0.)
- \*\* 44. *Craniophora ligustri*. 235=132+103 (NFa: H 4=2+2, I 50=23+27, K 2=1+1. NFb: G 1=1+0, H 18=16+2, I 38=18+20, J 5=5+0. SFa: D 1=1+0, I 33=20+13, J 8=8+0. SFb: G 2=1+1, H 2=0+2, I 43=24+19, J 11=2+9. WAa: G 1=1+0, I 3=1+2. WAb: H 3=3+0, I 6=2+4, J 2=2+0. LAa: I 1=1+0. LAb: I 1=0+1.)
45. *Craniophora praeclara*. 6=2+4 (NFa: H 2=1+1, I 2=0+2. SFa: I 1=0+1. SFb: I 1=1+0.)
- Subfamily Cryphiinae
46. *Cryphia obscura*. 1=1+0 (WAa: G 1=1+0.)
- Subfamily Noctuinae
47. *Euxoa oberthüri*. 4=2+2 (WAa: K 1=1+0. WAb: H 1=1+0, K 1=0+1. LAa: K 1=0+1.)
48. *Agrotis exclamationis informis*. 1=1+0 (SFb: F 1=1+0.)
49. *Agrotis ipsilon*. 7=7+0 (NFa: D 1=1+0, I 1=1+0. SFb: I 1=1+0. WAa: I 3=3+0. LAa: J 1=1+0.)
- \*\* 50. *Hermonassa arenosa*. 982=913+69 (NFa: G 24=24+0, H 5=3+2, K 61=60+1, L 199=182+17, M 5=5+0, N 1=1+0. NFb: G 23=23+0, J 1=1+0, K 31=31+0, L 99=90+9, M 14=14+0, N 10=9+1. SFa: H 2=1+1, J 1=1+0, K 2=2+0, L 66=63+3, M 3=2+1, N 1=1+0. SFb: G 2=2+0, H 1=1+0, J 1=1+0, K 3=3+0, L 41=38+3, N 2=2+0. WAa: G 33=32+1, H 3=1+2, J 2=2+0, K 41=39+2, L 70=75+4, M 6=5+1, N 1=1+0. WAb: G 11=11+0, I 1=1+0, J 2=2+0, K 64=59+5, L 68=62+6, M 12=6+6, N 1=1+0. LAa: G 15=15+0, H 5=2+3, J 1=0+1, K 10=10+0, L 20=20+0. LAb: G 1=1+0, H 1=1+0, K 4=4+0, L 2=2+0, N 1=1+0.)
51. *Hermonassa cecilia*. 2=2+0 (LAa: O 2=2+0.)
52. *Ochropleura plecta glaucimacula*. 10=9+1 (NFa: I 7=6+1. NFb: G 1=1+0, I 2=2+0.)
53. *Ochropleura triangularis*. 1=1+0 (WAa: J 1=1+0.)
54. *Ochropleura praecurrens*. 11=4+7 (NFa: K 1=0+1. WAa: J 2=0+2, K 1=0+1, L 2=2+0. WAb: J 1=0+1, K 1=1+0, L 3=1+2.)
- \*\* 55. *Sineugraphe* spp. 356=226+130 (NFa: G 29=24+5, H 2=2+0, I 1=1+0, J 8=5+3, K 14=13+1, L 11=10+1. NFb: G 6=6+0, H 4=4+0, I 1=1+0, J 6=3+3, K 4=3+1, L 11=5+6. SFa: G 8=5+3, H 1=1+0, J 8=6+2, K 6=3+3, L 19=11+8. SFb: G 20=9+11, H 1=1+0, J 12=10+2, K 17=15+2, L 24=8+16. WAa: J 4=3+1, K 8=7+1, L 7=4+3. WAa: G 17=6+11, J 5=5+0, K 14=8+6, L 23=14+9, LAa: G 20=11+9, H 2=0+2,



- I 3=2+1, J 7=5+2, K 5=2+3, L 4=2+2. LAb: G 2=0+2, J 7=6+1, K 5=2+3, L 10=3+7.)
- \* 56. *Diarsia canescens*. 64=57+7 (NFa: D 1=0+1, E 3=3+0. NFb: M 2=2+0, O 2=2+0, P 2=2+0. SFa: F 2=2+0, M 2=2+0, N 2=2+0, O 1=1+0, P 1=1+0. SFb: D 2=1+1, E 2=2+0, K 2=2+0, M 2=2+0, N 1=1+0, O 2=2+0, P 1=1+0. WAa: D 4=4+0, K 2=2+0, P 7=7+0. WAb: B 1=1+0, D 4=3+1, M 2=2+0, P 1=1+0. LAa: D 6=2+4, O 2=2+0, P 1=1+0. LAb: D 2=2+0, E 1=1+0, N 1=1+0.)
- \* 57. *Diarsia ruficauda*. 45=33+12 (NFb: F 2=2+0, G 10=8+2, I 2=0+2, J 2=2+0, L 1=1+0. SFa: I 1=1+0, J 1=1+0. SFb: F 1=1+0, G 6=3+3, K 2=1+1. WAa: G 6=6+0, I 4=1+3, J 2=2+0. LAa: D 3=2+1, H 1=1+0, J 1=1+0.)
- \* 58. *Diarsia* sp. 36=34+2 (NFa: J 1=1+0. NFb: I 6=6+0. SFa: I 4=3+1, J 4=4+0. SFb: E 2=2+0, I 4=4+0, J 4=4+0. WAa: I 3=3+0, J 4=4+0. WAb: I 1=1+0. LAa: I 1=1+0, J 2=1+1.)
59. *Amathes fuscostigma*. 8=5+3 (SFa: J 1=1+0, K 1=1+0. SFb: K 3=2+1, L 1=1+0. WAa: K 2=0+2.)
60. *Amathes c-nigrum*. 7=7+0 (NFa: I 2=2+0. SFb: J 1=1+0. WAa: J 4=4+0.)
61. *Amathes ditrapezium orientalis*. 11=11+0 (NFa: G 1=1+0. NFb: G 5=5+0. SFb: G 3=3+0. LAb: G 2=2+0.)
- \*\* 62. *Amathes efflorescens*. 134=105+29 (NFa: H 2=1+1, J 1=1+0, L 7=5+2, M 6=5+1, N 4=4+0. NFb: K 1=1+0, L 2=2+0, M 3=1+2, N 9=9+0, O 2=1+1. SFa: K 1=1+0, L 4=4+0, M 5=5+0, N 3=3+0, SFb: H 1=1+0, I 1=1+0, L 3=3+0, M 2=1+1, N 8=7+1. WAa: J 4=2+2, K 6=5+1, L 11=11+0, M 6=4+2. WAb: J 2=0+2, K 2=1+1, L 8=6+2, M 9=7+2, N 2=2+0. LAa: I 1=1+0, J 1=1+0, K 3=3+0, L 10=4+6, M 1=1+0, N 1=1+0. LAb: M 2=0+2.)
63. *Cerastis pallescens*. 51=49+2 (NFa: A 2=2+0, B 2=2+0. NFb: A 3=3+0. SFa: A 2=2+0. SFb: A 1=1+0, B 1=1+0. WAa: A 8=8+0, B 6=5+1, WAb: A 3=3+0, B 4=4+0. LAa: A 5=4+1, B 3=3+0. LAb: A 11=11+0.)
64. *Naenia contaminata*. 14=13+1 (NFa: F 2=2+0, G 5=4+1, H 2=2+0, I 1=1+0. SFa: G 3=3+0. WAb: F 1=1+0.)
65. *Anaplectoides virens*. 19=19+0 (NFa: G 5=5+0, H 2=2+0, I 4=4+0, NFb: G 1=1+0, I 3=3+0. SFa: I 1=1+0. SFb: G 1=1+0, I 1=1+0. WAb: I 1=1+0.)

## Subfamily Hadeninae

- \* 66. *Polia nebulosa askolda*. 31=31+0 (NFa: F 12=12+0, I 1=1+0. NFb: F 8=8+0. SFa: F 5=5+0. SFb: F 1=1+0. WAa: F 3=3+0. WAb: J 1=1+0.)

67. *Mamestra persicariae japonibia*. 9=8+1 (NFa: G 1=1+0. NFb: G 1=1+0, I 2=1+1. SFa: G 2=2+0. WAb: G 1=1+0, I 1=1+0. LAa: G 1=1+0.)
68. *Orthosia evanida*. 8=7+1 (NFa: A 1=1+0, B 1=1+0. NFb: A 1=1+0. SFa: A 1=1+0, B 1=1+0. LAa: A 2=1+1. LAa: A 2=1+1. LAb: A 1=1+0.)
69. *Orthosia* sp. 1. 8=8+0 (SFb: A 2=2+0. WAa: A 1=1+0. WAb: A 1=1+0. LAa: A 1=1+0. LAb: A 3=3+0.)
- \* 70. *Orthosia* sp. 2. 51=45+6 (NFa: A 4=3+1. NFb: A 1=1+0, B 1=1+0. SFa: A 13=12+1, B 3=1+2. SFb: B 3=3+0. WAa: A 3=3+0. WAb: A 2=2+0, B 1=1+0. LAa: A 9=8+1. LAb: A 11=10+1.)
71. *Orthosia odiosa*. 3=3+0 (NFa: B 1=1+0. SFa: A 1=1+0. LAb: B 1=1+0.)
72. *Orthosia munda*. 3=2+1 (LAb: A 2=1+1, B 1=1+0.)
- \* 73. *Orthosia gothica askoldensis*. 102=97+5 (NFa: A 6=5+1, B 3=3+0. SFa: A 6=5+1, B 1=1+0. SFb: A 10=9+1, B 4=3+1. WAa: A 9=9+0, B 3=3+0. WAb: A 13=12+1, B 6=6+0. LAa: A 10=10+0, B 1=1+0. LAb: A 28=28+0, B 2=2+0.)
74. *Clavipalpula aurariae*. 4=4+0 (WAa: A 1=1+0, B 1=1+0, C 1=1+0. WAb: B 1=1+0.)
75. *Perigrappa circumducta*. 1=1+0 (SFb: A 1=1+0.)
- \* 76. *Perigrappa hōnei*. 139=117+22 (NFa: A 7=3+4, B 6=6+0. NFb: B 8=8+0. SFa: A 6=5+1, B 5=5+0. SFb: A 7=5+2, B 3=2+1. WAa: A 7=7+0, B 6=6+0. WAb: A 22=15+7, B 9=6+3. LAa: A 17=16+1, B 7=6+1. LAb: A 25=24+1, B 4=3+1.)
77. *Mythimna turca limbata*. 20=19+1 (NFa: F 2=2+0, G 5=4+1, H 2=2+0, I 1=1+0. NFb: F 1=1+0, G 1=1+0. SFa: F 1=1+0. SFb: F 1=1+0, J 1=1+0. WAa: F 1=1+0, I 2=2+0. LAa: F 1=1+0. LAb: G 1=1+0.)
- \*\* 78. *Mythimna divergens*. 212=161+51 (NFa: F 2=2+0, G 32=31+1. NFb: F 4=4+0, G 13=13+0. SFa: F 2=2+0, G 47=29+18. SFb: G 56=40+16. WAa: G 11=10+1. WAb: G 10=8+2. LAa: G 31=21+10. LAb: G 4=1+3.)
- \*\* 79. *Mythimna* sp. 2. 74=49+25 (NFa: F 1=1+0, G 3=2+1, H 10=9+1, I 3=0+3. NFb: F 1=1+0, G 1=1+0, H 10=6+4. SFa: H 12=9+3, I 2=1+1. SFb: G 1=1+0, H 17=12+5. WAa: H 1=0+1. WAb: H 4=2+2, I 2=0+2. LAa: H 5=4+1. LAb: G 1=0+1.)
80. *Leucania pallens*. 4=4+0 (NFa: E 1=1+0. NFb: E 1=1+0. SFb: D 1=1+0. LAa: G 1=1+0.)
81. *Leucania separata*. 2=2+0 (SFb: O 2=2+0.)

## Subfamily Cucullinae

82. *Cucullia perforata*. 1=1+0 (NFa: I 1=1+0.)
- \* 83. *Brachionycha nubeculosa jezoensis*. 89=82+7 (NFa: A 18=17+1, B 1=1+0. NFb: A 1=1+0, B 1=1+0. SFa: A 12=11+1, B 6=6+0. SFb: A 7=7+0, B 2=2+0. WAb: A 8=8+0, B 1=1+0. LAa: A 17=13+4, B 1=1+0. LAb: A 13=12+1, B 1=1+0.)
84. *Lithomoia solidaginis*. 7=7+0 (NFb: O 2=2+0. SFa: M 1=1+0. WAa: K 1=1+0. L 1=1+0, M 1=1+0, N 1=1+0.)
85. *Lithophane socia*. 8=7+1 (NFa: P 2=2+0. SFa: D 1=0+1. WAa: D 1=1+0. LAa: A 1=1+0. LAb: A 2=2+0, B 1=1+0.)
86. *Lithophane plumbealis*. 2=1+1 (WAb: A 1=1+0. LAa: A 1=0+1.)
87. *Lithophane pruinosa*. 2=2+0 (NFb: N 1=1+0. SFa: N 1=1+0.)
88. *Lithophane consocia*. 3=2+1 (SFa: A 1=1+0. WAb: A 2=1+1.)
89. *Teratoglaea pacifica*. 3=2+1 (SFb: O 2=1+1. LAb: B 1=1+0.)
90. *Eupsilia transversa*. 3=1+2 (NFb: P 2=1+1. LAb: A 1=0+1.)
91. *Eupsilia boursini*. 3=1+2 (NFa: A 1=0+1. SFb: P 1=1+0. WAb: A 1=0+1.)
92. *Blepharidia costalis*. 1=1+0 (WAb: P 1=1+0.)
- \* 93. *Conistra grisescens*. 65=52+13 (NFa: N 2=2+0, O 2=2+0. NFb: B 3=2+1. SFa: A 11+8+3, B 5=5+0, C 1=1+0. SFb: A 8=5+3, B 9=8+1, C 2=2+0. WAa: O 2=2+0, P 1=1+0. WAb: A 2=1+1, B 2=2+0. LAa: A 8=5+3, B 1=1+0. LAb: A 4=3+1, B 2=2+0.)
94. *Conistra unimacula*. 46=41+5 (NFa: A 3=3+0, B 1=1+0, P 1=1+0. NFb: A 3=2+1, B 2=2+0. SFa: A 1=1+0, B 3=3+0. SFb: A 2=2+0, B 1=0+1. WAa: A 7=7+0. WAb: A 2=2+0, B 5=5+0. LAa: A 3=3+0, B 1=1+0. LAb: A 10=7+3, B 1=1+0.)
95. *Xanthia flavago*. 13=13+0 (NFa: O 4=4+0. NFb: M 1=1+0. SFa: O 3=3+0. SFb: N 2=2+0. O 3=3+0.)
- \* 96. *Telorta edentata*. 38=25+13 (NFa: P 1=0+1. NFb: N 2=2+0, P 2=2+0. SFa: N 2=1+1, P 5=4+1. SFb: L 2=1+1, N 2=1+1, O 2=1+1, P 2=1+1. WAa: P 5=4+1. WAb: N 2=1+1, P 8=4+4. LAa: P 1=1+0. LAb: O 2=2+0.)
97. *Valeriodes viridimacula*. 12=9+3 (SFb: N 1=1+0, P 1=0+1. WAa: O 3=3+0. WAb: O 2=1+1, P 3=2+1. LAa: P 1=1+0. LAb: P 1=1+0.)
- \* 98. *Blepharita melanodonta*. 63=47+16 (NFa: M 1=1+0, N 3=3+0, O 3=3+0. NFb: O 4=4+0. SFa: M 3=3+0, O 3=2+1, P 1=1+0. SFb: N 2=2+0, O 12=7+5. WAa: M 6=2+4, N 1=1+0, O 3=1+2, P 1=1+0. WAb: M 5=4+1, N 2=2+0, O 3=2+1. LAa: M 3=3+0, N 1=1+0, O 2=1+1. LAb: M 3=2+1, O 1=1+0.)

## Subfamily Amphipyriinae

99. *Apamea oriens*. 15=12+3 (NFa: I 1=1+0. NFb: J 1=1+0, K 1=1+0. SFa: I 1=1+0, K 1=1+0. SFb: I 2=2+0. WAa: J 2=1+1, K 1=0+1. WAb: K 2=1+1. LAa: G 1=1+0, I 1=1+0. LAb: I 1=1+0.)
100. *Apamea lateritia*. 5=5+0 (NFa: H 1=1+0. SFa: K 2=2+0. SFb: I 1=1+0. WAa: I 1=1+0.)
101. *Apamea conciliata*. 6=6+0 (NFa: F 4=4+0. NFb: F 2=2+0.)
102. *Apamea scolopacina subbrunnea*. 14=12+2 (NFa: G 2=2+0. NFb: F 1=1+0. SFb: F 5=5+0. WAa: F 1=1+0. LAa: F 5=3+2.)
103. *Actinotia intermedia*. 1=0+1 (WAb: D 1=0+1.)
104. *Triphaenopsis* sp. 1=1+0 (SFb: G 1=1+0.)
105. *Pygopteryx suava*. 2=1+1 (NFb: K 1=0+1. WAb: K 1=1+0.)
106. *Brachyxanthia zelotypa peculiaris*. 1=0+1 (NFa: K 1=0+1.)
107. *Hydraecia amurensis*. 2=2+0 (NFb: I 1=1+0. WAa: K 1=1+0.)
108. *Amphipoea* sp. 9=9+0 (NFa: G 1=1+0, H 1=1+0, J 1=1+0. NFb: I 2=2+0. WAa: I 2=2+0, J 1=1+0. LAb: I 1=1+0)
- \* 109. *Gortyna fortis*. 63=63+0 (NFa: M 3=3+0, N 11=11+0. NFb: M 3=3+0, N 10=10+0, O 6=6+0, P 1=1+0. SFa: M 3=3+0, N 2=2+0, P 1=1+0. SFb: N 3=3+0, O 2=2+0. WAa: M 1=1+0, N 4=4+0, O 3=3+0, P 1=1+0. WAb: K 1=1+0, M 2=2+0, N 2=2+0. LAa: M 1=1+0, N 1=1+0, P 1=1+0. LAb: M 1=1+0.)
110. *Rhizedra lutosa griseata*. 23=21+2 (NFa: M 6=6+0, O 2=2+0. NFb: K 1=0+1, L 1=1+0, O 4=4+0. SFa: M 1=1+0, O 2=2+0. SFb: K 2=1+1, M 2=2+0. WAa: O 2=2+0.)
111. *Phlogophora beatrix*. 13=13+0 (NFb: F 3=3+0, I 1=1+0. SFa: F 4=4+0. SFb: F 4=4+0. LAb: F 1=1+0.)
112. *Euplexia lucipara exotica*. 6=6+0 (NFa: G 2=2+0. NFb: G 1=1+0, I 1=1+0. WAb: G 1=1+0. LAb: I 1=1+0.)
- \* 113. *Euplexia aureopuncta*. 93=89+4 (NFa: F 12=12+0, G 27=26+1, H 7=7+0, I 9=7+2, J 3=2+1. NFb: F 6=6+0, G 2=2+0, I 7=7+0. SFa: G 1=1+0, I 1=1+0. SFb: G 2=2+0. WAa: F 1=1+0, G 1=1+0, I 2=2+0, J 2=2+0. WAb: G 5=5+0, I 1=1+0. LAa: F 1=1+0, I 2=2+0, J 1=1+0.)
114. *Euplexia bella*. 7=6+1 (NFa: J 1=1+0, L 1=1+0. NFb: I 1=0+1. SFa: I 1=1+0, J 1=1+0. WAa: K 1=1+0. LAa: K 1=1+0.)
115. *Karana laetevirens*. 1=1+0 (WAb: G 1=1+0.)
116. *Xenotrachea albidisca*. 3=3+0 (NFa: G 1=1+0. NFb: I 1=1+0. SFb: I 1=1+0.)
117. *Axyليا putris*. 1=1+0 (SFb: I 1=1+0.)
118. *Rusidrina depravata*. 1=1+0 (WAb: I 1=1+0.)

119. *Amphipyra livida corvina*. 23=8+15 (NFa: M 1=0+1, NFb: O 2=1+1, SFa: J 1=0+1, N 2=1+1, O 6=3+3, P 2=0+2. SFb: K 2=0+2, L 1=1+0, O 2=1+1. WAa: N 2=1+1. WAb: M 2=0+2.)
- \*\* 120. *Amphipyra erebina*. 156=112+44 (NFa: G 7=6+1, H 10=4+6, I 22=20+2, J 2=0+2, L 4=0+4. NFb: G 3=3+0, I 15=9+6, L 2=2+0. SFa: I 11=9+2, J 2=2+0, K 2=0+2. SFb: G 3=3+0, H 6=5+1, I 4=4+0, J 2=1+1, K 1=0+1, L 3=1+2. WAa: I 13=10+3, J 6=0+6, K 1=1+0. WAb: G 1=1+0, H 3=3+0, I 3=3+0. LAa: G 3=3+0, H 7=6+1, I 14=13+1, J 1=0+1, K 1=0+1. LAb: I 3=3+0, L 1=0+1.)
121. *Amphipyra schrenckii*. 7=5+2 (NFa: G 2=1+1, L 2=1+1. NFb: G 1=1+0. SFb: G 1=1+0. WAa: L 1=1+0.)
- \* 122. *Amphipyra pyramidea*. 37=16+21 (NFa: G 1=0+1, J 2=1+1, K 2=0+2, M 1=1+0, N 1=1+0, O 2=1+1. NFb: I 1=0+1, K 1=0+1, N 2=0+2. SFa: J 1=1+0, M 1=1+0, N 1=1+0, O 3=2+1. SFb: K 2=1+1, N 1=1+0, P 1=1+0. WAa: K 3=0+3, N 1=1+0. WAb: J 3=0+3, K 3=1+2, L 1=0+1, M 1=1+0, N 1=1+0. LAa: G 1=0+1.)
123. *Mormo muscivirens*. 2=2+0 (NFb: G 1=1+0, L 1=1+0.)
124. *Orthogonia sera*. 11=5+6 (NFa: G 1=1+0, J 1=1+0. SFb: L 1=0+1. WAa: K 2=0+2. WAb: G 2=2+0, L 2=1+1. LAa: K 2=0+2.)
125. *Cosmia affinis magna*. 1=1+0 (SFa: H 1=1+0.)
126. *Cosmia unicolor*. 3=3+0 (NFb: K 1=1+0, N 2=2+0.)
127. *Cosmia restituta picta*. 10=8+2 (NFb: L 1=1+0, M 1=1+0, O 2=2+0. SFb: G 4=2+2. LAa: G 2=2+0.)
128. *Cosmia camptostigma*. 26=20+6 (NFa: G 8=7+1, H 4=4+0. NFb: G 2=2+0. SFa: G 5=2+3. SFb: G 6=4+2. WAb: G 1=1+0.)
129. *Cosmia cara*. 8=8+0 (NFa: G 1=1+0, I 3=3+0. NFb: G 1=1+0, I 1=1+0. SFa: H 1=1+0. SFb: I 1=1+0.)
130. *Cosmia exigua*. 23=19+4 (NFa: H 3=3+0, I 1=1+0, J 2=2+0. NFb: H 3=3+0, I 2=1+1, J 1=1+0. SFa: I 1=1+0, J 1=1+0. SFb: J 1=1+0, M 2=0+2. WAa: J 2=2+0. WAb: I 1=1+0, J 2=1+1. LAb: I 1=1+0.)
131. *Zenobia subtusa*. 1=1+0 (SFa: L 1=1+0.)
132. *Enargia paleacea*. 3=3+0 (NFa: N 1=1+0. SFa: N 1=1+0. SFb: N 1=1+0.)
133. *Telesilla amethystina austera*. 1=0+1 (NFb: L 1=0+1.)
134. *Prometopus flavicollis*. 13=13+0 (WAa: F 3=3+0. WAb: F 2=2+0. LAa: F 1=1+0, G 6=6+0. LAb: F 1=1+0.)
- \* 135. *Dadica* sp. 44=43+1 (NFa: F 4=4+0, G 1=1+0. NFb: F 6=6+0, G 5=5+0. SFa: F 8=7+1, G 2=2+0. SFb: F 4=4+0, G 1=1+0.)

- WAA : G 6=6+0. WAb : F 2=2+0, G 5=5+0.)
136. *Callopietria repleta*. 3=3+0 (NFb: F 2=2+0. WAb: J 1=1+0.)
- \* 137. *Chasminodes* spp. 46=39+7 (NFa: G 11=11+0, H 5=5+0, J 3=3+0, K 1=0+1, L 2=0+2, M 1=1+0. NFb: G 3=3+0, J 2=2+0. SFa: K 1=1+0. WAA: G 3=3+0, K 1=1+0, L 2=2+0. WAb: G 1=1+0, K 1=1+0, M 1=1+0. LAa: G 8=4+4.)
138. *Chasminodes atrata*. 38=38+0 (LAa: G 36=34+2. LAb: G 2=2+0.)

## Subfamily Euteliinae

139. *Eutelia geyeri*. 1=1+0 (NFb: O 1=1+0.)
- Subfamily Nycteolinae
- \* 140. *Kerala decipiens*. 34=32+2 (NFa: I 12=12+0. NFb: F 12=10+2. SFb: F 2=2+0, J 1=1+0. WAb: F 6=6+0. LAa: F 1=1+0.)
141. *Gelastocera exusta*. 2=2+0 (SFa: E 1=1+0. LAb: D 1=1+0.)
142. *Macrochthonia fervens*. 25=21+4 (NFa: H 2=2+0, I 4=4+0. NFb: H 2=2+0, I 5=3+2. SFa: F 1=1+0, I 2=2+0, J 1=1+0. SFb: I 1=1+0, J 1=1+0. WAA: J 1=1+0, L 1=0+1. WAb: I 1=1+0, J 1=1+0, K 1=1+0. LAa: I 1=0+1.)
143. *Bena prasinana*. 15=13+2 (NFa: E 1=1+0. NFb: E 1=1+0, F 2=2+0, I 1=1+0. SFa: F 3=3+0, SFb: E 2=2+0, G 1=0+1, J 1=1+0. WAb: F 1=1+0, G 1=1+0, H 1=0+1.)
- \* 144. *Sinna extrema*. 38=26+12 (NFa: H 4=4+0, I 5=1+4. NFb: H 3=3+0, I 16=11+5. WAA: I 2=2+0. WAb: I 5=3+2. LAb: C 1=1+0, G 1=1+0, I 1=0+1.)

## Subfamily Plusiinae

145. *Diachrysia leonina*. 12=12+0 (NFa: I 3=3+0. NFb: G 1=1+0, I 6=6+0. WAb: I 2=2+0.)
146. *Autographa nigrisigna*. 1=1+0 (NFa: O 1=1+0.)
147. *Macdunnoughia confusa*. 2=2+0 (NFa: O 2=2+0.)
148. *Autographa purissima*. 2=1+1 (NFb: N 1=1+0. SFa: L 1=0+1.)
149. *Plusia festucae*. 2=2+0 (NFb: F 1=1+0. WAb: I 1=1+0.)
150. *Erythroplusia ornatissima*. 3=3+0 (NFa: K 1=1+0. NFb: K 1=1+0. WAb: L 1=1+0.)
151. *Polychrysia aurata*. 1=1+0 (NFb: F 1=1+0.)
152. *Lamprotes mikadina*. 1=1+0 (NFb: H 1=1+0.)

## Subfamily Catocalinae

153. *Catocala fraxini jezoensis*. 1=1+0 (WAb: N 1=1+0.)
154. *Caocala lara*. 1=1+0 (NFa: K 1=1+0.)
- \* 155. *Catocala dissimilis*. 35=35+0 (NFa: H 3=3+0. NFb: H 3=3+0, I 1=1+0. SFa: H 1=1+0, J 2=2+0, L 9=9+0, M 1=1+0, N 1=1+0. SFb: K 2=2+0, L 4=4+0, N 3=3+0. WAA: L 1=1+0. WAb: I 1=1+0, L 2=2+0, M 1=1+0.)

156. *Catocala nupta nozawae*. 3=3+0 (SFa: H 1=1+0. SFb: H 1=1+0. WAb: L 1=1+0.)
157. *Catocala dula*. 2=2+0 (SFa: L 1=1+0. WAb: M 1=1+0.)
158. *Catocala electa zalmunna*. 22=22+0 (NFa: I 1=1+0, J 6=6+0, L 2=2+0. NFb: I 3=3+0. SFb: J 8=8+0. WAa: K 2=2+0.)
- \* 159. *Catocala fulminea xarippe*. 31=31+0 (NFa: G 3=3+0, H 3=3+0, I 1=1+0. NFb: G 1=1+0, H 1=1+0, I 2=2+0. SFa: G 6=6+0, H 3=3+0, I 1=1+0. SFb: G 4=4+0, H 2=2+0, I 1=1+0, WAb: G 2=2+0, I 1=1+0.)
- \* 160. *Catocala bella*. 31=31+0 (NFa: H 4=4+0, I 2=2+0, L 1=1+0. NFb: I 5=5+0. SFa: H 3=3+0, I 2=2+0. SFb: H 4=4+0, I 5=5+0. WAa: G 1=1+0. WAb: G 1=1+0, H 1=1+0, I 2=2+0.)
161. *Catocala agitatrix*. 7=7+0 (NFa: G 4=4+0. SFa: G 2=2+0. WAb: G 1=1+0.)
162. *Catocala ella*. 2=2+0 (WAb: I 2=2+0.)
163. *Dermaleipa juno*. 7=6+1 (NFa: I 1=1+0, M 1=1+0. SFa: K 1=1+0. WAa: J 1=1+0, M 1=1+0. WAb: K 1=0+1. LAb: K 1=1+0.)
164. *Mocis annetta*. 22=22+0 (NFa: F 4=4+0, G 3=3+0. NFb: F 4=4+0, G 1=1+0. SFb: F 4=4+0, G 1=1+0. WAb: F 1=1+0, G 3=3+0. LAa: G 1=1+0.)
165. *Blasticorhinus ussuriensis*. 9=9+0 (NFa: H 1=1+0, I 1=1+0. NFb: H 2=2+0. SFa: F 1=1+0, G 1=1+0, I 1=1+0. SFb: I 1=1+0. LAa: I 1=1+0.)
166. *Calpe capucina*. 3=3+0 (NFb: G 2=2+0. SFb: G 1=1+0.)
167. *Scoliopteryx libatrix*. 22=18+4 (NFa: F 1=1+0, G 2=2+0, H 1=1+0. NFb: A 1=1+0, B 1=1+0, C 1=1+0, D 1=1+0, F 3=3+0. SFa: A 1=1+0. SFb: B 1=1+0, G 2=1+1, M 1=1+0. WAa: K 1=0+1, M 2=0+2. WAb: A 1=1+0. LAa: A 1=1+0, G 1=1+0.)
168. *Arcte coerulea*. 4=3+1 (WAa: L 1=1+0, O 2=1+1. WAb: M 1=1+0.)
- \* 169. *Sypna hercules*. 60=49+11 (NFa: G 5=4+1, H 3=3+0, I 2=0+2, J 1=1+0. NFb: G 3=3+0, I 4=1+3, J 1=1+0. K 1=1+0. SFa: G 3=3+0, I 2=2+0. SFb: G 2=2+0, I 1=0+1, K 2=1+1. WAa: G 1=1+0, I 1=0+1, K 1=0+1, L 1=1+0. WAb: I 4=3+1, J 4=4+0, L 1=1+0. LAa: G 4=4+0, H 2=2+0, I 5=5+0, J 3=3+0, K 2=2+0. LAb: J 1=1+0.)
170. *Sypna astrigera*. 4=4+0 (SFb: E 2=2+0. LAa: E 1=1+0. LAb: L 1=1+0.)
171. *Chrysothrum amatum*. 2=1+1 (SFa: F 1=0+1. SFb: F 1=1+0.)
- \* 172. *Lygephila maxima enormis*. 39=32+7 (NFa: G 1=1+0, H 3=3+0, I 5=5+0, K 3=3+0. NFb: G 1=1+0, I 3=2+1. SFa: G 4=2+2,

- I 4=3+1, J 1=1+0. SFb: G 4=2+2, H 2=1+1, I 4=4+0. WAb: I 2=2+0, J 2=2+0.)
173. *Lygephila* spp. 32=30+2 (NFa: B 1=1+0, D 1=1+0. NFb: D 1=1+0. SFa: B 2=2+0, D 3=3+0. SFb: B 3=3+0, D 1=1+0, K 1=1+0. WAa: A 1=1+0, B 1=1+0, D 4=4+0, E 1=1+0, P 1=1+0, WAb: B 2=2+0, D 4=4+0. LAa: A 1=1+0, C 1=1+0, K 1=1+0, M 1=0+1. LAb: B 1=0+1.)
174. *Pangrapta manleyi*. 1=1+0 (NFa: J 1=1+0.)
175. *Diomea jankowskii*. 1=1+0 (SFa: J 1=1+0.)
176. *Rivula sericealis*. 5=5+0 (NFb: G 4=4+0, H 1=1+0.)

### Family NOTODONTIDAE

177. *Stauropus fagi persimilis*. 12=12+0 (NFa: F 2=2+0. NFb: F 2=2+0. SFa: D 1=1+0, F 2=2+0, I 1=1+0. WAb: F 2=2+0, I 1=1+0. LAb: D 1=1+0.)
178. *Nadata cristata*. 3=3+0 (SFa: F 3=3+0.)
- \* 179. *Fentonia ocypete*. 110=110+0 (NFa: F 16=16+0. NFb: F 33=33+0. SFa: F 34=34+0. SFb: F 24=24+0. WAb: F 1=1+0. LAb: F 2=2+0.)
- \* 180. *Cnethodonta griseescens griseescens*. 53=52+1 (NFa: F 15=15+0, G 4=4+0, H 10=10+0, I 3=3+0. NFb: F 3=3+0, I 4=4+0. SFa: D 1=1+0, F 4=4+0, H 1=1+0, I 1=1+0. SFb: I 2=2+0. WAb: D 1=1+0, I 3=2+1. LAb: F 1=1+0.)
- \*\* 181. *Nerice bipartita*. 522=521+1 (NFa: D 3=3+0, E 7=7+0, F 43=43+0, G 17=17+0, I 34=34+0, J 3=3+0. NFb: D 2=2+0, E 4=4+0, F 28=28+0, G 9=9+0, I 42=42+0, J 3=3+0. SFa: D 4=4+0, E 25=25+0, F 65=65+0, G 14=14+0, H 1=1+0, I 65=65+0, J 8=8+0. SFb: D 2=2+0, E 14=14+0, F 18=18+0, G 10=10+0, H 3=3+0, I 13=13+0, J 2=2+0, K 1=1+0. WAa: E 2=2+0, G 1=1+0, I 9=8+1, J 1=1+0. WAb: E 2=2+0, F 14=14+0, G 9=9+0, I 22=22+0, J 4=4+0, K 1=1+0. LAa: G 2=2+0, I 10=10+0. LAb: F 1=1+0, G 1=1+0, I 3=3+0.)
182. *Nerice davidi*. 12=12+0 (NFa: E 1=1+0, I 1=1+0. NFb: D 1=1+0. SFa: I 1=1+0. SFb: D 1=1+0, E 1=1+0, G 2=2+0, I 1=1+0. WAb: D 1=1+0, I 1=1+0. LAb: I 1=1+0.)
183. *Urodonta arcuata*. 10=10+0 (NFa: D 1=1+0, E 1=1+0. NFb: C 2=2+0, D 2=2+0, E 1=1+0. SFa: D 1=1+0. WAb: D 2=2+0.)
184. *Urodonta viridimixta*. 27=27+0 (NFa: D 3=3+0, E 1=1+0, F 4=4+0, G 1=1+0. NFb: D 1=1+0, F 6=6+0. SFa: D 1=1+0, F 3=3+0. WAb: F 4=4+0, G 2=2+0. LAb: C 1=1+0.)
185. *Notodonta tritophus sugitanii*. 3=3+0 (NFb: D 1=1+0. SFa: D 2=2+0.)
- \* 186. *Notodonta rothschildi*. 24=21+3 (SFa: I 6=6+0. SFb: I 6=6+0.)



- WAa: I 1=1+0. WAb: I 1=1+0. LAa: H 1=1+0, I 3=2+1. LAb: D 1=1+0, I 5=3+2.)
187. *Peridea graeseri*. 1=1+0 (NFb: I 1=1+0.)
188. *Peridea lativitta*. 2=2+0 (NFa: I 1=1+0. SFb: D 1=1+0.)
189. *Peridea monetaria*. 2=2+0 (SFa: J 1=1+0. SFb: E 1=1+0.)
190. *Peridea gigantea*. 24=24+0 (NFa: F 4=4+0, G 6=6+0. NFb: F 3=3+0, G 6=6+0. SFa: F 2=2+0. SFb: F 1=1+0. WAb: F 1=1+0. LAb: F 1=1+0.)
- \* 191. *Suzukia cinerea*. 109=106+3 (NFa: D 1=0+1, E 6=6+0, F 8=8+0, I 7=7+0, J 1=1+0. NFb: D 1=1+0, E 2=2+0, F 6=6+0, I 10=10+0. SFa: D 3=3+0, E 4=4+0, F 12=12+0, H 8=8+0, I 15=14+1. SFb: D 2=2+0, E 1=1+0, F 4=4+0, G 2=2+0, I 3=3+0, J 4=4+0. WAb: E 1=1+0, F 3=3+0, I 1=0+1, J 3=3+0. LAb: J 1=1+0.)
192. *Semidonta biloba*. 19=19+0 (NFa: F 12=12+0, I 1=1+0. SFL I 1=1+0. SFb: F 1=1+0, I 2=2+0. WAa: F 1=1+0. LAa: I 1=1+0.)
193. *Allodonta leucodera*. 11=11+0 (NFb: F 8=8+0, I 3=3+0.)
- \* 194. *Hagapteryx admirabilis*. 46=46+0 (NFa: G 22=22+0. NFb: G 22=22+0. WAb: G 2=2+0.)
- \* 195. *Lophopteryx jezoensis*. 75=74+1 (NFa: D 3=3+0, E 5=5+0, F 5=5+0, H 3=3+0, I 7=6+1. NFb: D 2=2+0, F 3=3+0, I 11=11+0. SFa: D 3=3+0, E 4=4+0, F 3=3+0, I 17=17+0. SFb: E 1=1+0, I 4=4+0, J 1=1+0. WAa: E 2=2+0, F 1=1+0.)
- \*\* 196. *Lophopteryx* spp. 131=131+0 (NFa: D 1=1+0, E 7=7+0, F 16=16+0, G 1=1+0, H 10=10+0, I 15=15+0, J 2=2+0. NFb: D 1=1+0, E 1=1+0, F 12=12+0, I 13=13+0. SFa: E 1=1+0, F 7=7+0, G 1=1+0, I 9=9+0, J 2=2+0. SFb: D 1=1+0, E 3=3+0, F 4=4+0, I 5=5+0. WAa: F 2=2+0, I 3=3+0. WAb: D 3=3+0, F 2=2+0, G 1=1+0, H 1=1+0, I 1=1+0, J 2=2+0. LAa: I 2=2+0. LAb: F 1=1+0, I 1=1+0.)
197. *Lophontosia cuculus*. 26=26+0 (NFa: H 3=3+0, I 7=7+0, J 2=2+0. NFb: I 12=12+0, J 1=1+0. WAb: I 1=1+0.)
198. *Fusapteryx ladislai*. 10=10+0 (NFa: I 2=2+0. NFb: I 2=2+0, L 1=1+0. SFa: J 2=2+0. SFb: I 1=1+0. WAb: F 1=1+0, I 1=1+0.)
- \* 199. *Togepteryx velutina*. 72=72+0 (NFa: D 1=1+0, E 4=4+0, F 18=18+0, I 8=8+0. NFb: D 2=2+0, F 10=10+0, G 1=1+0, I 3=3+0. SFa: C 1=1+0, D 2=2+0, F 5=5+0. SFb: C 1=1+0, D 1=1+0, F 1=1+0. WAa: F 2=2+0, G 1=1+0. WAb: C 2=2+0, D 2=2+0, F 3=3+0, I 1=1+0. LAa: D 1=1+0, F 2=2+0.)
200. *Odontosia sieversii japonica*. 14=11+3 (NFa: A 4=1+3. WAb: A 1=1+0. LAa: A 9=9+0.)

201. *Himeropteryx miraculosa*. 11=8+3 (NFa: N 2=2+0, O 1=1+0. SFa: O 2=2+0. SFb: O 2=1+1. WAa: O 2=1+1. LAa: O 2=1+1.)
- \* 202. *Shaka atrovittatus*. 39=39+0 (NFa: F 12=12+0, G 1=1+0. NFb: F 8=8+0, G 6=6+0. SFa: F 2=2+0, G 2=2+0. SFb: F 6=6+0, G 1=1+0. WAb: F 1=1+0.)
- \* 203. *Microphalera grisea*. 83=75+8 (NFa: D 1=0+1, E 1=1+0, H 5=5+0, I 18=17+1, J 1=1+0, K 1=0+1. NFb: D 3=1+2, E 1=1+0, I 7=5+2, J 1=1+0. SFa: I 9=9+0, J 4=4+0. SFb: E 1=1+0, I 4=4+0. WAa: D 2=2+0, E 1=1+0. WAb: D 7=7+0, E 1=1+0, I 4=3+1, J 4=4+0. LAa: D 1=1+0, I 5=5+0. LAb: C 1=1+0.)
- \* 204. *Mimodonta albicosta*. 45=45+0 (NFa: F 26=26+0, G 2=2+0, I 2=2+0. NFb: F 5=5+0, G 1=1+0. SFa: F 4=4+0. WAb: F 5=5+0.)
205. *Epodonta lineata*. 39=37+2 (NFa: D 3=3+0, I 7=7+0, J 1=1+0, N 1=1+0. NFb: D 1=1+0, I 2=2+0, J 1=1+0. SFa: I 4=4+0, J 1=1+0, K 1=1+0. SFb: B 2=2+0, D 2=2+0, G 2=2+0, J 1=1+0. WAa: J 2=1+1. WAb: D 1=1+0, F 2=2+0, I 1=1+0, J 3=2+1. LAa: I 1=1+0.)
- \* 206. *Naganoea manleyi*. 84=84+0 (NFa: N 2=2+0, O 6=6+0. NFb: N 1=1+0. SFa: M 1=1+0, N 6=6+0, O 6=6+0. SFb: N 16=16+0, O 4=4+0. WAa: N 7=7+0, O 3=3+0. WAb: N 17=17+0. LAa: N 7=7+0. LAb: N 6=6+0, O 2=2+0.)
207. *Epizaranga permagna*. 15=15+0 (NFa: E 1=1+0, H 1=1+0, I 2=2+0, J 1=1+0. NFb: F 3=3+0. SFa: F 1=1+0. WAb: D 2=2+0, E 1=1+0, F 2=2+0, I 1=1+0.)
208. *Lophocosma atriplaga*. 9=9+0 (NFa: D 1=1+0, E 2=2+0, F 3=3+0. NFb: E 1=1+0. SFa: D 1=1+0. WAb: D 1=1+0.)
209. *Hupodonta pulcherrima corticalis*. 15=10+5 (NFa: J 3=0+3. NFb: I 6=6+0, J 1=1+0. WAa: J 1=0+1. WAb: I 3=3+0. LAa: I 1=0+1.)
- \*\* 210. *Hupodonta lignea*. 514=489+25 (NFa: F 14=11+3, H 51=51+0, I 108=104+4. NFb: G 22=22+0, H 56=52+4, I 95=94+1, J 4=3+1. SFa: G 13=12+1, H 17=16+1, I 21=17+4, J 2=2+0. SFb: G 5=3+2, H 15=14+1, I 20=20+0. WAa: G 2=2+0, I 4=4+0. WAb: G 8=8+0, H 2=2+0, I 30=30+0, J 1=1+0. LAa: G 1=1+0, H 15=14+1, I 4=4+0, J 1=1+0. LAb: G 1=1+0, I 1=0+1, J 1=0+1.)
211. *Spataliodes dives dives*. 12=12+0 (NFa: F 2=2+0, G 1=1+0, I 2=2+0. NFb: F 3=3+0, I 4=4+0.)
212. *Pterostoma sinica*. 26=26+0 (NFa: E 1=1+0, F 4=4+0, H 4=4+0. NFb: F 7=7+0. SFa: E 1=1+0, F 5=5+0. SFb: F 1=1+0. WAb: E 1=1+0. LAa: F 1=1+0. LAb: G 1=1+0.)

213. *Pydna pallida*. 2=2+0 (NFa: F 1=1+0. SFb: F 1=1+0.)  
 214. *Clostera anachoreta*. 6=6+0 (NFa: K 1=1+0. NFb: F 2=2+0, G 1=1+0. SFa: F 1=1+0. WAb: G 1=1+0.)  
 215. *Clostera anastomosis tristis*. 2=2+0 (NFb: J 1=1+0. LAa: J 1=1+0.)  
 \* 216. *Gonoclostera timonides latipennis*. 36=34+2 (NFa: F 3=3+0, G 1=1+0, H 4=4+0, I 11=10+1. NFb: G 1=1+0, I 10=10+0. SFa: I 1=1+0. WAb: G 1=1+0, I 1=1+0. LAa: G 3=2+1.)

#### Family LYMANTRIIDAE

217. *Dasychira argentata*. 4=3+1 (LAa: J 4=3+1.)  
 218. *Dasychira pseudabietis*. 23=23+0 (NFa: D 1=1+0, E 6=6+0. NFb: D 2=2+0, E 4=4+0. SFa: D 1=1+0. SFb: D 4=4+0, E 2=2+0. WAb: D 2=2+0. LAa: D 1=1+0.)  
 \* 219. *Dasychira lunulata*. 58=55+3 (NFa: D 3=3+0, E 3=3+0, F 4=2+2. NFb: D 2=2+0, E 9=9+0. SFa: D 3=3+0, E 15=15+0. SFb: D 6=6+0, E 4=4+0. WAb: D 4=4+0, E 2=2+0. LAa: D 1=1+0. LAb: E 1=1+0, F 1=0+1.)  
 \* 220. *Dasychira locuples confusa*. 47=38+9 (NFa: G 14=13+1 NFb: G 16=13+3. SFa: G 6=4+2. SFb: G 5=2+3. WAa: G 2=2+0. WAb: G 1=1+0. LAa: G 3=3+0)  
 221. *Dasychira eurydice*. 7=6+1 (NFa: I 1=1+0, J 1=1+0. NFb: L 2=2+0. SFa: I 1=1+0, J 1=1+0. LAb: N 1=0+1.)  
 222. *Orgyia thyellina*. 1=1+0 (NFa: G 1=1+0.)  
 223. *Arctornis L-nigrum asahinai*. 12=9+3 (NFa: G 1=1+0. NFb: G 4=3+1. SFa: G 1=1+0, H 3=3+0. SFb: G 3=1+2.)  
 224. *Leucoma salicis*. 12=12+0 (NFa: H 1=1+0, I 1=1+0. NFb: F 2=2+0, G 3=3+0. SFa: F 2=2+0, G 3=3+0.)  
 225. *Ivela auripes*. 12=11+1 (NFa: G 1=1+0. NFb: G 9=8+1. SFa: H 1=1+0. WAb: G 1=1+0.)  
 226. *Lymantria mathura aurora*. 4=3+1 (NFa: I 2=2+0. NFb: H 1=1+0, I 1=0+1.)  
 \*\* 227. *Lymantria monacha*. 144=116+28 (NFa: G 9=7+2, H 6=5+1, I 9=9+0. NFb: H 8=6+2, I 10=7+3. SFa: G 1=1+0, H 2=1+1, I 1=1+0, J 1=0+1. SFb: I 3=3+0. WAa: G 5=5+0, H 2=1+1, I 4=3+1, G 13=11+2, L 1=1+0. WAb: F 1=1+0, G 1=1+0, I 25=24+1, J 6=1+5, L 1=1+0. LAa: G 3=1+2, H 9=7+2, I 20=17+3, K 1=1+0. LAb: I 2=1+1.)  
 228. *Pida niphonis*. 7=7+0 (NFa: K 1=1+0. NFb: F 1=1+0. SFa: F 1=1+0. SFb: G 2=2+0. WAb: G 1=1+0. LAa: G 1=1+0.)  
 229. *Euproctis similis*. 8=8+0 (NFa: F 3=3+0. NFb: F 1=1+0. SFa: F 1=1+0. SFb: J 1=1+0. WAa: F 1=1+0. WAb: L 1=1+0.)  
 230. *Euproctis piperita*. 18=18+0 (NFa: F 6=6+0, H 1=1+0. NFb: F 5=5+0. SFa: F 2=2+0. SFb: F 1=1+0, G 2=2+0. LAb: G

1=1+0.)

231. *Euproctis staudingeri*. 1=1+0 (WAa: G 1=1+0.)

#### Family LASIOCAMPIDAE

- \* 232. *Gastropacha quercifolia cerridifolia*. 47=47+0 (NFa: E 2=2+0, F 6=6+0, G 3=3+0. NFb: F 1=1+0, G 6=6+0. SFa: F 3=3+0, G 16=16+0. WAb: F 1=1+0, G 7=7+0. LAb: F 1=1+0, G 1=1+0.)
233. *Malacosoma neustria*. 5=5+0 (NFb: G 1=1+0. SFb: G 4=4+0.)
- \*\* 234. *Somadasy's brevivenis*. 178=178+0 (NFa: D 8=8+0, E 31=31+0, F 56=56+0. NFb: D 6=6+0, E 8=8+0, F 27=27+0. SFa: D 3=3+0, E 2=2+0, F 12=12+0. SFb: F 3=3+0. WAb: D 6=6+0, E 11=11+0, F 4=4+0. LAb: F 1=1+0.)
235. *Philudoria potatoria*. 2=2+0 (NFa: I 1=1+0. WAa: H 1=1+0.)
236. *Philudoria albomaculata*. 4=4+0 (SFa: G 1=1+0, I 1=1+0. LAa: H 1=1+0, I 1=1+0.)
- \* 237. *Odonestis pruni rufescens*. 59=57+2 (NFa: F 4=4+0, G 16=16+0. NFb: G 12=10+2, H 4=4+0. SFa: G 11=11+0, H 3=3+0. SFb: G 5=5+0. WAb: F 1=1+0, G 2=2+0. LAb: G 1=1+0.)
238. *Takanea miyakei*. 1=1+0 (WAa: G 1=1+0.)
- \* 239. *Epicnaptera ilicifolia japonica*. 48=48+0 (NFa: D 9=9+0. NFb: C 6=6+0, D 5=5+0. SFa: B 1=1+0, C 2=2+0, D 9=9+0. SFb: B 6=6+0, C 2=2+0, D 7=7+0. WAb: D 1=1+0.)
240. *Dendrolimus* sp. 10=10+0 (NFb: G 1=1+0. WAa: F 2=2+0. WAb: F 2=2+0, G 3=3+0. LAa: H 1=1+0. LAb: G 1=1+0.)
241. *Dendrolimus undans flaveola*. 13=10+3 (NFa: N 1=0+1. NFb: N 1=1+0. SFa: N 2=1+1. SFb: N 7=0+7. WAb: N 1=1+0. LAb: M 1=0+1.)

#### Family BOMBYCIDAE

- \* 242. *Bombyx mori mandarina*. 39=37+2 (NFa: M 1=1+0, N 1=1+0, O 3=1+2. NFb: O 9=9+0. SFa: O 8=8+0. SFb: M 1=1+0, O 9=9+0. WAa: O 4=4+0. WAb: M 1=1+0. LAa: O 2=2+0.)
243. *Oberthürria falcigera*. 23=23+0 (NFb: I 13=13+0. SFa: I 5=5+0. SFb: I 1=1+0. WAa: J 1=1+0. WAb: I 3=3+0.)

#### Family THYATIRIDAE

- \*\* 244. *Thyatira batis*. 118=108+10 (NFa: G 2=2+0, H 7=7+0, I 22=19+3, J 2=2+0, K 1=1+0. NFb: G 2=2+0, H 7=7+0, I 21=17+4, J 1=1+0. SFa: E 1=1+0, G 1=1+0, I 14=13+1. WAb: G 1=1+0, H 2=2+0, I 3=3+0. LAa: H 2=2+0, I 3=2+1. LAb: G 1=1+0.)

245. *Habrosyne pyritoides derasoides*. 7=7+0 (NFa: G 3=3+0, J 1=1+0. NFb: G 1=1+0, H 1=1+0. WAb: G 1=1+0.)
246. *Cymatochrocis dieckmanni*. 1=1+0 (WAb: I 1=1+0.)
247. *Tethea* sp. 4=4+0 (SFb: F 4=4+0.)
248. *Togaria tancrei*. 11=10+1 (NFb: O 4=4+0. SFa: O 2=2+0. SFb: N 1=1+0, O 3=2+1. LAb: O 1=1+0.)
249. *Parapsestis argenteopicta*. 21=20+1 (NFb: E 1=1+0, F 10=10+0. SFa: F 8=8+0. WAa: F 1=0+1. LAa: F 1=1+0.)
250. *Saronaga japonica*. 8=8+0 (NFa: F 1=1+0, G 1=1+0. NFb: F 4=4+0. SFa: F 2=2+0.)
251. *Mimopsestis basalis*. 1=1+0 (NFa: F 1=1+0.)
252. *Kurama mirabilis*. 11=11+0 (NFa: B 1=1+0. NFb: D 1=1+0. SFa: D 1=1+0. SFb: B 4=4+0, D 1=1+0. WAb: B 2=2+0. LAb: B 1=1+0.)
253. *Neoploca arcipennis*. 21=21+0 (NFa: A 1=1+0. SFa: A 2=2+0, B 3=3+0. SFb: A 2=2+0, B 3=3+0. WAa: A 1=1+0. WAb: B 4=4+0. LAa: B 2=2+0. LAb: A 3=3+0.)
254. *Neodaruma tamanukii*. 2=2+0 (SFa: A 2=2+0.)

#### Family DREPANIDAE

255. *Callicilix abraxata abraxata*. 8=8+0 (SFa: F 2=2+0. WAa: G 1=1+0. WAb: F 2=2+0, G 1=1+0. LAa: G 2=2+0.)
256. *Auzata superba*. 17=14+3 (NFa: F 1=1+0, J 1=1+0. NFb: F 3=3+0, G 1=1+0, J 1=1+0. SFa: G 1=1+0, I 3=2+1, J 1=1+0. SFb: J 1=0+1. WAb: I 1=1+0, J 2=2+0. LAa: J 1=0+1.)
257. *Falcaria curvatula acuta*. 12=10+2 (NFb: G 1=1+0, I 2=1+1. SFa: I 1=1+0, H 1=1+0. SFb: C 1=1+0, D 1=1+0, J 2=2+0. WAa: F 1=1+0. WAb: J 1=1+0. LAb: J 1=0+1.)
258. *Callidrepana patrana palleolus*. 33=33+0 (NFa: G 2=2+0, I 1=1+0, K 3=3+0, L 1=1+0. NFb: I 1=1+0, J 2=2+0, K 1=1+0. SFa: J 3=3+0, L 2=2+0. SFb: D 1=1+0, J 4=4+0. WAa: J 2=2+0, K 1=1+0. WAb: J 5=5+0, K 1=1+0. LAa: H 1=1+0, J 1=1+0, K 1=1+0.)
- \* 259. *Nordstromia grisearia*. 44=41+3 (NFa: I 8=8+0. NFb: I 6=6+0. SFa: H 15=15+0, I 5=3+2, J 4=4+0, K 1=0+1. SFb: G 1=1+0. WAa: J 2=2+0. WAb: F 1=1+0. LAa: I 1=1+0.)
- \* 260. *Albara scabiosa*. 58=58+0 (NFa: H 9=9+0, I 4=4+0. NFb: I 3=3+0. SFa: H 21=21+0, I 3=3+0. SFb: H 9=9+0, I 3=3+0. WAb: I 1=1+0. LAa: H 2=2+0, I 1=1+0. LAb: H 2=2+0.)
261. *Drepana harpagula*. 6=6+0 (NFa: F 1=1+0. NFb: I 2=2+0. SFa: F 1=1+0, J 1=1+0. SFb: K 1=1+0.)
- \* 262. *Psiloreta pulchripes*. 101=99+2 (NFa: F 5=5+0, I 2=2+0, J 15=14+1, K 7=7+0, L 4=4+0. NFb: F 1=1+0, G 1=1+0, I 3=

3+0, J 4=4+0, K 6=6+0, L 3=3+0. SFa: F 1=1+0, I 1=1+0, J 3=3+0, K 1=1+0, L 4=4+0. SFb: J 2=2+0, K 7=7+0, L 2=1+1. WAa: J 3=3+0, K 2=2+0, L 1=1+0. WAb: F 1=1+0, J 8=8+0, K 3=3+0, L 3=3+0. LAa: F 1=1+0, L 2=2+0. LAb: J 2=2+0, K 2=2+0, M 1=1+0.)

## Family GEOMETRIDAE

### Subfamily Oenochrominae

263. *Naxa seriaria*. 1=1+0 (NFb: G 1=1+0.)

### Subfamily Geometrinae

- \*\* 264. *Terpna superans*. 391=390+1 (NFa: F 11=11+0, G 95=95+0, H 62=62+0, I 8=8+0, K 1=1+0. NFb: F 9=9+0, G 80=80+0, H 52=52+0, I 6=6+0, K 1=1+0, L 3=3+0. SFa: G 3=3+0, H 2=2+0. SFb: G 20=20+0, H 14=14+0, I 1=0+1. WAa: G 1=1+0, H 2=2+0, I 1=1+0. WAb: F 3=3+0, G 1=1+0, H 6=6+0, I 2=2+0. LAa: G 4=4+0, H 2=2+0, L 1=1+0.)
265. *Agathie carissima*. 5=5+0 (NFa: F 1=1+0. NFb: F 1=1+0, G 2=2+0. SFa: F 1=1+0.)
- \*\* 266. *Geometra papilionaria subgrigua*. 422=421+1 (NFa: F 6=6+0, G 46=46+0, H 20=20+0, I 58=58+0, J 3=3+0. NFb: F 3=3+0, G 16=16+0, H 31=31+0, I 47=47+0, J 7=7+0, K 1=1+0. SFa: F 1=1+0, G 9=9+0, H 2=2+0, I 23=23+0, J 3=3+0. SFb: F 2=2+0, G 14=14+0, H 7=7+0, I 22=22+0, J 6=6+0. WAa: G 3=3+0, H 1=1+0, I 10=10+0, J 1=1+0. WAb: G 9=9+0, H 1=1+0, I 16=16+0, J 8=8+0. LAa: G 1=1+0, H 2=2+0, I 16=16+0, J 10=10+0. LAb: G 1=1+0, H 3=3+0, I 7=7+0, J 6=5+1.)
- \* 267. *Geometra sponsaria*. 41=41+0 (NFa: F 3=3+0, G 11=11+0, H 1=1+0, K 1=1+0. NFb: F 1=1+0, G 9=9+0, K 1=1+0. SFa: G 6=6+0. SFb: G 5=5+0. WAa: G 1=1+0. WAb: G 1=1+0. LAa: G 1=1+0.)
268. *Geometrinae* sp. 1. 10=10+0 (NFa: D 1=1+0, F 3=3+0. NFb: F 3=3+0. SFb: F 1=1+0. WAa: F 1=1+0. WAb: F 1=1+0.)
- \* 269. *Geometrinae* sp. 2. 39=39+0 (NFa: F 12=12+0, G 1=1+0. NFb: F 11=11+0. SFa: F 3=3+0. SFb: F 6=6+0. WAb: F 4=4+0. LAa: F 1=1+0. LAb: F 1=1+0.)
270. *Geometrinae* sp. 3. 4=4+0 (NFa: F 2=2+0. NFb: F 2=2+0.)
271. *Geometrinae* sp. 4. 2=2+0 (NFa: F 1=1+0. NFb: F 1=1+0.)
272. *Geometrinae* sp. 5. 1=1+0 (NFa: F 1=1+0.)

### Subfamily Larentiinae

273. *Acasis viretata*. 2=1+1 (WAa: B 1=1+0. LAa: B 1=0+1.)

274. *Trichopteryx polycommata anna*. 8=5+3 (NFb: A 2=2+0. SFb: A 3=0+3. WAb: B 1=1+0. LAb: A 2=2+0.)
275. *Trichopteryx ussurica*. 6=5+1 (NFa: B 1=1+0. NFb: B 3=3+0. SFa: B 1=1+0. LAa: B 1=0+1.)
- \* 276. *Trichopteryx ustata*. 72=56+16 (NFa: A 10=7+3. NFb: A 4=1+3, B 4=2+2. SFa: A 6=4+2, B 2=2+0. SFb: A 6=5+1. WAa: A 14=13+1. WAb: A 6=5+1, B 2=1+1. LAa: A 15=13+2, C 1=1+0. LAb: A 2=2+0.)
277. *Trichopteryx volitans*. 40=35+5 (NFa: A 4=4+0, B 1=1+0. NFb: A 1=1+0, B 2=2+0. SFa: A 2=2+0, B 3=1+2. SFb: A 2=2+0, B 4=1+3. WAa: A 4=4+0, B 1=1+0. WAb: A 2=2+0. LAa: A 8=8+0, B 2=2+0. LAb: A 2=2+0, B 2=2+0.)
278. *Trichopteryx terranea*. 25=20+5 (NFa: A 3=3+0, B 1=1+0. NFb: A 1=1+0, B 2=2+0. SFa: A 1=1+0, B 3=1+2. SFb: A 3=3+0, B 2=1+1. WAa: A 4=2+2, B 1=1+0. WAb: A 1=1+0, B 3=3+0.)
279. *Trichopteryx* sp. 1. 7=7+0 (NFa: A 3=3+0. SFb: A 2=2+0, B 2=2+0.)
280. *Trichopteryx anna*. 15=14+1 (NFa: A 3=3+0. LAa: A 4=4+0, B 3=2+1. LAb: A 3=3+0, B 2=2+0.)
281. *Microloba bella bella*. 6=6+0 (NFb: I 1=1+0. SFb: C 1=1+0, E 3=3+0. LAb: E 1=1+0.)
282. *Brabira artemidora artemidora*. 10=10+0 (NFa: B 2=2+0, D 1=1+0, E 3=3+0. NFb: E 1=1+0. SFa: E 1=1+0. SFb: D 1=0+1. LAb: B 1=1+0.)
283. *Xanthorhoë* sp. 1=0+1 (LAa: J 1=0+1)
284. *Glaucorhoe unduliferaria unduliferaria*. 9=7+2 (WAa: I 2=1+1. WAb: I 1=1+0. LAa: I 5=4+1. LAb: I 1=1+0.)
- \* 285. *Euphyia cineraria*. 36=33+3 (NFa: F 3=3+0, I 6=3+3. NFb: F 3=3+0, I 5=5+0. SFa: F 6=6+0, I 2=2+0. SFb: F 1=1+0, G 2=2+0, J 4=4+0. WAb: J 2=2+0. LAa: F 1=1+0, J 1=1+0.)
286. *Electrophaës corylata granitalis*. 5=3+2 (NFb: E 1=1+0. WAa: E 1=1+0. WAb: D 2=1+1. LAa: D 1=0+1.)
287. *Idiotephria evanescens*. 3=1+2 (NFa: D 1=0+1. SFb: D 2=0+2.)
- \* 288. *Idiotephria amelia*. 186=148+38 (NFa: A 6=6+0, B 16=15+1, C 1=1+0. NFb: B 8=7+1. SFa: A 14=14+0, B 20=17+3. SFb: A 4=3+1, B 53=37+16. WAa: A 12=9+3, B 4=4+0. WAb: A 6=6+0, B 8=5+3. LAa: A 10=8+2, B 8=6+2. LAb: A 11=8+3, B 5=2+3.)
289. *Hydriomena* sp. 1=0+1 (WAb: D 1=0+1.)
290. *Triphosa dubitata amblychiles*. 28=17+11 (NFb: I 1=1+0, L 2=2+0, M 2=2+0, N 2=1+1. SFa: K 1=1+0, L 4=0+4, M 1=1+0, N 1=1+0. SFb: A 6=2+4, M 2=2+0, N 1=1+0. WAa: L 1=1+0.

- WAb: L 2=1+1, M 1=1+0. LAb: A 1=0+1.)
291. *Photoscotosia atrostrigata atrostrigata*. 3=3+0 (NFa: K 1=1+0, L 1=0+1. SFa: L 1=1+0.)
292. *Calleulype* sp. 2=1+1 (NFa: J 1=1+0. NFb: J 1=0+1.)
293. *Lygris ledereri inurbana*. 14=13+1 (NFa: H 7=6+1. SFb: M 1=1+0, L 2=2+0. WAa: K 1=1+0. WAb: L 1=1+0, M 1=1+0. LAa: N 1=1+0.)
294. *Lygris convergenata*. 22=22+0 (NFa: G 1=1+0, H 3=3+0. NFb: G 4=4+0, I 1=1+0. SFa: G 1=1+0. SFb: G 3=3+0. WAa: G 2=2+0, I 1=1+0. WAb: G 4=4+0. LAa: G 2=2+0.)
- \* 295. *Gandaritis fixseni magnifica*. 72=51+21 (NFa: I 1=0+1, J 2=2+0, K 2=1+1, L 1=0+1, M 2=1+1, N 2=2+0. NFb: H 3=3+0, I 1=1+0, J 3=2+1. SFa: I 2=2+0, J 2=1+1, K 1=1+0, L 3=3+0, N 3=3+0. SFb: J 3=3+0, L 2=2+0. WAa: H 2=2+0, J 2=2+0, L 8=5+3, M 1=1+0, N 2=2+0. WAb: H 1=1+0, I 2=2+0, J 5=2+3, K 5=1+4, L 3=1+2, M 2=1+1, N 2=2+0. LAa: J 1=1+0. LAb: K 2=1+1, L 1=0+1.)
- \* 296. *Gandaritis agnes agnes*. 98=74+24 (NFa: G 21=17+4, H 3=3+0. NFb: G 17=16+1. SFa: G 12=9+3, H 3=3+0. SFb: G 8=4+4. WAa: G 5=5+0. WAb: G 18=12+6. LAa: G 10=4+6. LAb: G 1=1+0.)
297. *Lampropteryx* sp. 1=1+0 (NFa: E 1=1+0.)
298. *Ecliptopera umbrosaria*. 16=15+1 (NFa: D 1=0+1, E 1=1+0, I 5=5+0, L 1=1+0 M 1=1+0. NFb: I 1=1+0. SFa: I 1=1+0. WAa: E 1=1+0. WAb: E 1=1+0, LAa: E 1=1+0. LAb: E 2=2+0.)
299. *Ecliptopera* sp. 2=2+0 (NFa: L 2=2+0.)
- \* 300. *Eustroma melancholica melancholica*. 102=92+10 (NFa: G 10=8+2, H 4=4+0, I 11=10+1, J 1=1+0, K 1=0+1. NFb: G 9=8+1, H 5=5+0, I 19=19+0. SFa: G 8=8+0, H 2=2+0, I 3=3+0, J 1=0+1. SFb: G 8=5+3, I 2=2+0. WAa: I 5=4+1, J 2=2+0. WAb: H 1=1+0, I 5=5+0, L 2=2+0. LAa: D 1=1+0, I 1=1+0. LAb: I 1=1+0.)
- \* 301. *Eustroma aerosa*. 55=53+2 (NFa: G 1=1+0, H 4=4+0, I 3=3+0, J 7=7+0. NFb: G 2=2+0, H 4=4+0, I 11=9+2, J 6=6+0, L 1=1+0. SFa: I 2=2+0. SFb: E 2=2+0, H 2=2+0, I 1=1+0, J 1=1+0. WAa: D 1=1+0, H 1=1+0, I 1=1+0. WAb: J 2=2+0, K 1=1+0. LAa: I 1=1+0, J 1=1+0.)
- \* 302. *Lobogonodes erectaria*. 34=32+2 (NFa: A 1=1+0, D 1=0+1, G 3=3+0, H 3=3+0, I 6=6+0. SFa: I 2=2+0. SFb: I 2=2+0. WAa: G 3=3+0. I 3=3+0, WAb: D 1=0+1, G 1=1+0. LAa: G 2=2+0, I 4=4+0, K 1=1+0. LAb: I 1=1+0.)
- \* 303. *Plemyria rubiginata japonica*. 41=32+9 (NFa: F 1=1+0, G 1=1+0,



- I 8=7+1. NFb: G 2=2+0, H 4=4+0, I 7=2+5. SFa: G 1=1+0.  
SFb: G 3=3+0, I 2=2+0. WAa: I 1=1+0. WAb: G 3=3+0,  
H 2=2+0, I 4=3+1. LAa: I 1=0+1. LAb: I 1=0+1.)
304. *Operophtera* sp. 28=15+13 (WAa: M 1=1+0, N 13=7+6, WAb: N  
9=2+7, O 2=2+0. LAa: N 1=1+0. LAb: O 2=2+0.)
305. *Oporinia viridipurpurescens*. 7=7+0 (WAa: M 3=3+0. WAb: M  
1=1+0. LAa: M 1=1+0. LAb: M 2=2+0.)
306. *Venusia semistrigata*. 14=12+2 (NFa: B 1=1+0. SFa: B 2=1+1.  
WAa: B 2=1+1. WAb: B 4=4+0. LAa: B 2=2+0. LAb: B  
3=3+0.)
307. *Eupithecia* sp. 1. 9=9+0 (SFa: B 1=1+0. WAa: A 1=1+0. WAb:  
A 3=3+0. LAa: A 2=2+0. LAb: A 2=2+0.)
- \* 308. *Eupithecia* sp. 2. 69=56+13 (NFa: A 10=9+1, B 7=3+4. NFb: A  
2=0+2. SFa: A 2=2+0. SFb: A 1=1+0. WAa: A 11=11+0,  
B 6=6+0. WAb: A 1=1+0, B 15=11+4. LAa: B 6=4+2. LAb:  
A 2=2+0, B 6=6+0.)
- \* 309. *Eupithecia daemionata*. 203=74+129 (NFa: A 1=1+0. NFb: A 1=  
1+0. WAa: A 104=37+67, B 28=3+25. WAb: A 20=16+4, B  
22=8+14, D 2=0+2. LAa: A 17=5+12, B 2=0+2. LAb: A  
2=2+0, B 4=1+3.)

## Subfamily Ennominae

- \* 310. *Calospilos* spp. 56=54+2 (NFa: D 1=1+0, E 1=1+0, F 6=6+0, G  
1=1+0, I 5=5+0. NFb: D 1=1+0, E 1=1+0, F 5=5+0, I  
5=5+0, J 1=1+0, K 1=1+0. SFa: E 2=2+0, F 1=1+0, G 1=  
1+0, I 1=1+0, J 1=1+0, L 1=0+1. SFb: E 3=3+0, F 4=4+0,  
I 3=3+0, J 2=2+0. WAb: E 2=2+0, G 1=1+0, I 2=2+0, J  
1=1+0, K 1=0+1. LAa: D 2=2+0.)
- \* 311. *Bapta simplicior simplicior*. 56=44+12 +NFa: K 4=2+2, L 7=3+4.  
NFb: J 2=2+0, K 1=1+0, L 5=4+1. LAa: J 3=3+0, K 8=7  
+1, L 5=3+2. SFb: K 1=1+0, L 5=5+0. WAb: L 5=4+1, M  
3=2+1. LAa: K 1=1+0, L 1=1+0. LAb: K 2=2+0, L 3=3+0.)
- \* 312. *Bapta temerata*. 36=30+6 (NFa: G 3=3+0, I 6=5+1. NFb: I 5=  
4+1. SFa: D 1=0+1, E 2=2+0, G 2=2+0, I 3=3+0. SFb:  
E 1=1+0, G 2=2+0, I 1=1+0. WAa: D 3=1+2, E 1=1+0.  
WAb: D 1=1+0, E 2=2+0, G 1=1+0, J 1=1+0. LAa: G 1=  
0+1.)
- \* 313. *Cabera griseolimbata griseolimbata*. 53=52+1 (NFa: F 11=11+0, G  
2=2+0. NFb: F 20=20+0, G 1=1+0. SFa: F 8=8+0, G 3=3+0.  
SFb: F 1=1+0, G 3=2+1. WAa: G 1=1+0. WAb: F 1=1+0,  
G 1=1+0. LAa: G 1=1+0.)
- \*\* 314. *Semiothisa shanghaiaria*. 113=107+6 (NFb: H 1=1+0, I 1=1+0.  
LAa: G 1=1+0, H 35=31+4, I 53=51+2, J 18=18+0. LAb: I  
4=4+0.)

- \* 315. *Semiothisa liturata depressa*. 49=48+1 (SFb: J 1=0+1. WAb: E 1=1+0. LAa: D 5=5+0, E 40=40+0. LAb: E 2=2+0.)
316. *Semiothisa normata proximaria*. 4=4+0 (NFb: I 4=4+0.)
- \* 317. *Monocerotesa lutearia*. 43=34+9 (NFa: G 2=2+0, H 4=4+0, I 10=6+4. NFb: I 25=20+5. WAa: I 1=1+0. WAb: I 1=1+0.)
318. *Metabraxas clerica clerica*. 19=19+0 (NFa: F 2=2+0, I 3=3+0, J 1=1+0. NFb: F 1=1+0, G 1=1+0, I 4=4+0, J 1=1+0. SFa: I 1=1+0. WAa: J 1=1+0. WAb: G 1=1+0, H 1=1+0, I 2=2+0.)
- \* 319. *Metabraxas paucimaculata*. 42=42+0 (NFa: L 3=3+0. SFa: L 6=6+0, M 6=6+0. SFb: L 3=3+0. WAa: L 3=3+0, M 6=6+0. WAb: L 5=5+0, M 10=10+0.)
320. *Arichanna albomacularia*. 19=19+0 (NFa: D 2=2+0. NFb: C 1=1+0, D 1=1+0. SFb: C 1=1+0, D 1=1+0. WAa: D 1=1+0. WAb: D 9=9+0. LAa: E 2=2+0. LAb: C 1=1+0.)
- \*\* 321. *Jankowskia athleta*. 143=143+0 (NFa: F 18=18+0, G 1=1+0. NFb: F 40=40+0. SFa: F 24=24+0, G 1=1+0. SFb: F 22=22+0. WAa: F 3=3+0. WAb: F 22=22+0. LAa: F 9=9+0, J 1=1+0. LAb: J 2=2+0.)
322. *Cleora* sp. 1. 13=3+10 (SFa: D 1=0+1, E 1=1+0. SFb: D 3=0+3. WAa: D 1=1+0, E 2=1+1. WAb: D 2=0+2. LAa: E 3=0+3.)
323. *Cleora* sp. 2. 27=27+0 (NFa: A 1=1+0. NFb: B 2=2+0. SFa: A 6=6+0, B 1=1+0. SFb: A 6=6+0, B 3=3+0. WAa: A 1=1+0. WAb: B 1=1+0. LAa: A 2=2+0. LAb: A 3=3+0, B 1=1+0.)
- \*\* 324. *Ramobia basifuscaria*. 985=472+513 (NFa: J 1=0+1, K 1=1+0, L 20=20+0, M 83=67+16, N 65=33+32, O 168=34+134, P 1=1+0. NFb: J 1=1+0, M 12=6+6, N 20=14+6, O 57=18+39. SFa: J 1=1+0, L 1=1+0, M 31=21+10, N 81=53+28, O 91=15+76. SFb: J 1=1+0, M 19=17+2, N 11+6+5, O 17=2+15. WAa: M 43=28+15, N 16=3+13, O 15=1+14. WAb: J 1=1+0, K 2=2+0, L 1=0+1, M 86=59+27, N 67=50+17, O 32=0+32. LAa: M 1=1+0, N 4=1+3, O 17=0+17, P 1=1+0. LAb: M 5=4+1, N 4=1+3, O 8=8+0.)
- \*\* 325. *Alcis medialbifera*. 772=281+491 (NFa: K 4=2+2, L 7=3+4. NFb: N 2=2+0. SFa: K 1=1+0, L 1=0+1, M 1=0+1. WAa: J 12=11+1, K 110=31+79, L 254=47+207, M 62=50+12, N 14=2+12. WAb: J 5=5+0, K 48=23+25, L 113=29+84, M 31=2+29, N 8=0+8. LAa: J 4=4+0, K 26=24+2, L 26=21+5, M 1=0+1. LAb: J 3=3+0, K 20=8+12, L 17=13+4, M 2=0+2.)
- \* 326. *Alcis flavolinearia*. 54=35+19 (NFa: N 4=3+1 O 8=8+0. NFb: N 2=1+1. SFa: M 1=1+0, O 5=3+2, P 1=0+1. SFb: N 3=2+1, O 3=2+1. WAa: N 2=1+1, O 11=6+5. WAb: N 1=0+1. LAa: N 5=2+3. LAb: N 6=4+2, O 2=2+0.)

327. *Deileptenia ribeata*. 31=17+14 (WAa: F 1=1+0, G 1=1+0. WAb: G 3=3+0, J 6=3+3. LAa: G 14=6+8, J 4=2+2. LAb: J 2=1+1.)
- \* 328. *Pseuderannis* sp. 177=95+82 (NFa: A 7=1+6, B 26=6+20. NFb: A 1=1+0, B 3=3+0. SFa: A 8=5+3, B 10=5+5, N 1=1+0. SFb: B 7=5+2, N 2=2+0. WAa: A 4=4+0, B 3=2+1, F 11=2+9. WAb: A 1=1+0, B 16=10+6, F 19=10+9, N 1=1+0. LAa: A 22=9+13, B 10=8+2, F 6=6+0. LAb: A 11=5+6, B 8=8+0.)
- \* 329. *Boarmia* sp. 95=89+6 (NFa: F 33=33+0, G 2=2+0, H 1=1+0. NFb: F 18=18+0, G 5=5+0. SFa: F 19=16+3. SFb: F 5=4+1, G 1=1+0. WAa: F 1=0+1, G 2=2+0. WAb: F 7=6+1. LAb: F 1=1+0.)
- \*\* 330. *Boarmia lunifera*. 147=130+17 (NFa: F 61=51+10, G 21=21+0, H 4=4+0, I 2=2+0. NFb: F 36=33+3, I 2=2+0. SFa: F 13=12+1. SFb: F 6=3+3. LAa: I 1=1+0. LAb: H 1=1+0.)
331. *Boarmia fumosaria*. 15=10+5 (NFa: H 1=1+0, I 5=5+0. NFb: I 6=3+3. SFa: I 1=1+0. WAb: I 2=2+0.)
- \*\* 332. *Phthonosema tendinosaria*. 185=161+24 (NFa: F 68=54+14, J 34=34+0. NFb: F 32=28+4. SFa: F 18=16+2. SFb: F 13=9+4. WAb: F 5=5+0. LAa: F 9=9+0, G 1=1+0. LAb: F 5=5+0.)
333. *Calicha ornataria*. 2=2+0 (NFa: E 1=1+0. NFb: E 1=1+0.)
334. *Ophthalmodes irrorataria irrorataria*. 18=17+1 (NFa: F 8=8+0. SFb: E 2=2+0, F 4=4+0. WAa: F 1=1+0. WAb: F 3=2+1.)
335. *Ectropis* sp. 1. 34=33+1 (NFa: A 1=0+1, B 4=4+0. NFb: B 1=1+0. SFa: A 1=1+0, B 1=1+0. SFb: A 1=1+0. WAa: A 1=1+0, B 2=2+0. WAb: A 1=1+0, B 6=6+0. LAa: A 3=3+0, B 5=5+0. LAb: A 2=2+0, B 5=5+0.)
336. *Ectropis* sp. 2. 12=12+0 (NFa: E 2=2+0. NFb: C 1=1+0. SFa: E 1=1+0. SFb: E 4=4+0. WAb: E 2=2+0. LAa: C 1=1+0, E 1=1+0.)
337. *Ectropis* sp. 3. 8=8+0 (NFa: A 2=2+0. WAa: A 2=2+0. WAb: A 1=1+0. LAb: A 3=3+0.)
338. *Ectropis concinnata interrupta*. 15=15+0 (NFa: B 1=1+0, C 1=1+0. NFb: A 1=1+0, B 1=1+0. SFa: A 3=3+0. SFb: B 2=2+0. WAa: B 1=1+0. LAa: B 4=4+0. LAb: A 1=1+0.)
339. *Ectropis consonaria*. 17=10+7 (NFa: D 3=1+2. SFa: D 3=3+0. SFb: D 2=1+1. WAa: D 6=3+3. WAb: D 2=1+1. LAa: D 1=1+0.)
340. *Elphos insueta insueta*. 2=1+1 (SFb: I 1=0+1. WAb: I 1=1+0.)
341. *Xandrames latiferaria*. 24=24+0 (NFa: E 2=2+0, F 7=7+0. NFb: F 9=9+0. SFa: F 3=3+0. SFb: F 1=1+0. WAa: F 2=2+0.)
342. *Scionomia* sp. 31=31+0 (NFa: I 1=1+0, K 1=1+0. NFb: J 1=1+0, K 3=3+0, L 5=5+0. SFa: J 1=1+0, K 2=2+0, L 4=

- 4+0. SFb: J 2=2+0. WAa: J 1=1+0, K 2=2+0, L 1=1+0.  
WAb: K 3=3+0, L 1=1+0. LAa: J 1=1+0, L 1=1+0. LAb:  
J 1=1+0.)
- \* 343. *Larerannis filipjevi*. 66=66+0 (NFa: A 10=10+0. NFb: A 8=8+0,  
B 1=1+0. SFb: A 17=17+0, B 1=1+0. SFb: A 16=16+0, B  
1=1+0. WAa: A 2=2+0. WAb: A 1=1+0. LAa: A 3=3+0.  
LAb: A 6=6+0.)
- \* 344. *Larerannis* sp. 42=42+0 (NFa: P 21=21+0. NFb: P 4=4+0. SFa:  
P 4=4+0. SFb: P 1=1+0. WAb: P 2=2+0. LAa: P 5=5+0.  
LAb: P 5=5+0.)
345. *Erannis golda*. 12=12+0 (NFa: P 1=1+0. NFb: P 2=2+0. SFa: P  
2=2+0. SFb: P 1=1+0. WAa: P 1=1+0. WAb: P 2=2+0. LAa:  
P 2=2+0. LAb: P 1=1+0.)
- \*\* 346. *Erannis gigantea*. 182=182+0 (WAa: P 135=135+0. WAb: P 4=4+0.  
LAa: P 38=38+0. LAb: P 5=5+0.)
347. *Zamacra juglansiararia*. 1=1+0 (SFb: A 1=1+0.)
348. *Biston betularia parva*. 1=1+0 (NFa: I 1=1+0.)
349. *Biston robustum*. 1=0+1 (SFa: D 1=0+1.)
350. *Biston comitata*. 1=1+0 (WAb: F 1=1+0.)
351. *Medasina nikkonis*. 48=39+9 (NFa: B 6=4+2. NFb: B 1=1+0, D  
1=0+1. SFa: A 2=2+0, B 3=2+1. SFb: B 1=0+1. WAa: 11=  
11+0, C 4=1+3. WAb: B 8=7+1, C 1=1+0, D 2=2+0. LAa:  
B 3=3+0. LAb: B 5=5+0.)
352. *Erebomorpha consors*. 18=18+0 (NFa: E 1=1+0, F 3=3+0. NFb:  
F 5=5+0. SFa: F 5=5+0. SFb: F 2=2+0. WAb: F 1=1+0.  
LAb: D 1=1+0.)
353. *Pachyligia dolosa*. 13=13+0 (NFa: A 4=4+0, B 1=1+0. NFb: A  
3=3+0, B 2=2+0. SFa: A 1=1+0. SFb: A 1=1+0. LAa: A  
1=1+0.)
- \* 354. *Angerona prunaria turbata*. 83=82+1 (NFa: F 14=14+0, G 12=  
12+0. NFb: 15=15+0, G 8=8+0. Sfa: F 9=9+0, G 7=6+1.  
SFb: F 4=4+0, G 7=7+0. WAa: G 1=1+0. WAb: G 1=1+0.  
LAa: G 5=5+0.)
355. *Hemerophila atrilineata*. 26=26+0 (NFa: G 5=5+0, H 6=6+0, I  
1=1+0. NFb: G 6=6+0. Sfa: G 3=3+0. SFb: G 3=3+0. WAb:  
G 1=1+0. LAb: H 1=1+0.)
356. *Ceruncina retractaria senilis*. 5=5+0 (SFa: E 1=1+0. SFb: E 2=2+0.  
LAa: E 1=1+0. LAb: E 1=1+0.)
357. *Cryptochorina amphidasyaria*. 40=39+1 (NFa: A 4=4+0, B 3=3+0.  
NFb: B 1=1+0. SFa: A 2=2+0, B 2=1+1. SFb: A 2=2+0.  
WAa: A 1=1+0, B 1=1+0. WAb: A 2=2+0, B 9=9+0. LAa:  
A 5=5+0, B 3=3+0. LAb: A 3=3+0, B 2=2+0.)
358. *Nothomiza formosa*. 2=2+0 (NFb: I 1=1+0. WAa: J 1=1+0.)

- \*\* 359. *Ennomos autumnaria nephotropia*. 233=201+32 (NFa: I 2=2+0, J 4=4+0, K 9=8+1, L 1=1+0, M 44=44+0, N 14=11+3, O 10=7+3. NFb: J 2=0+2, K 3=2+1, L 1=1+0, M 4=4+0, N 1=1+0, O 3=2+1. SFa: I 2=2+0, J 5=3+2, K 8=6+2, L 5=4+1, M 29=26+3, N 1=1+0, O 9=9+0. SFb: J 2=2+0, K 10=10+0, L 4=3+1, M 3=3+0, N 2=2+0, O 2=2+0. WAa: J 5=2+3, K 3=3+0, L 1=0+1, M 6=5+1, N 1=0+1, O 3=1+2. WAb: J 4=3+1, K 5=5+0, L 4=3+1, M 14=13+1. LAa: L 1=1+0, M 4=3+1. LAb: M 2=2+0.)
360. *Acrodontis fumosa fumosa*. 6=6+0 (SFa: M 2=2+0. SFb: M 1=1+0. WAa: M 1=1+0. WAb: M 1=1+0. LAb: N 1=1+0.)
- \*\* 361. *Gonodontis bidentata harutai*. 243=239+4 (NFa: D 1=1+0. E 2=2+0. NFb: D 2=2+0. SFa: D 1=1+0, E 1=1+0. SFb: D 1=1+0. WAa: D 45=45+0, E 42=42+0. WAb: C 1=1+0, D 27=27+0, E 30=29+1. LAa: C 1=1+0, D 35=34+1, E 34=32+2. LAb: C 1=1+0, D 11=11+0, E 8=8+0.)
362. *Colotois pennaria ussuriensis*. 11=11+0 (NFb: P 1=1+0. SFb: P 1=1+0. WAa: P 3=3+0. WAb: P 4=4+0. LAa: P 2=2+0.)
363. *Zethenia albonotaria nesiotis*. 22=19+3 (NFa: D 1=1+0, E 4=3+1, F 3=3+0. NFb: E 2=2+0. SFa: D 1=0+1, E 2=2+0. SFb: D 1=1+0, E 3=2+1, F 1=1+0. WAa: E 1=1+0. LAa: D 1=1+0, E 2=2+0.)
364. *Zethenia rufescentaria rufescentaria*. 22=21+1 (NFa: F 5=5+0. WAa: F 1=1+0. WAb: D 1=1+0, E 3=3+0, F 2=1+1. LAa: F 5=5+0. LAb: D 1=1+0, E 4=4+0.)
365. *Zanclidia testaceata*. 14=14+0 (NFa: G 2=2+0. NFb: G 3=3+0. SFa: G 3=3+0. SFb: G 1=1+0. WAa: G 2=2+0. WAb: G 1=1+0. LAa: G 1=1+0. LAb: G 1=1+0.)
- \* 366. *Ocoelophora lentiginosaria lentiginosaria*. 38=34+4 (NFa: I 9=8+1, J 1=1+0. NFb: I 17=14+3. SFa: I 3=3+0. SFb: I 3=3+0. WAa: J 2=2+0. WAb: I 3=3+0.)
367. *Eilicrinia wehrlii*. 1=1+0 (NFb: F 1=1+0.)
368. *Anagoga pulveraria japonica*. 25=24+1 (NFa: D 1=1+0, H 3=3+0, I 1=1+0. SFb: G 2=2+0, H 1=1+0, I 3=3+0. WAa: D 1=1+0, G 1=1+0. WAb: G 2=2+0, H 1=1+0. LAa: B 1=1+0, C 1=1+0, G 3=3+0, H 1=0+1. LAb: D 1=1+0, G 1=1+0, I 1=1+0.)
- \*\* 369. *Selenia tetralunaria tetralunaria*. 154=125+129 (NFa: B 1=1+0, G 36=32+4, H 12=11+1, I 11=8+3. NFb: G 5=2+3, H 11=10+1, I 11=11+0. SFa: B 2=2+0, D 1=1+0, G 8=5+3, H 1=0+1. SFb: A 1=1+0, B 3=3+0, G 7=2+5, H 7=7+0, I 5=4+1. WAa: B 1=1+0, D 1=1+0. WAb: B 2=2+0, G 11=8+3, H 4=3+1, I 2=2+0. LAa: B 4=4+0, G 4=2+2. LAb: B 1=0+1,

- C 1=1+0, G 1=1+0.)
- \* 370. *Apeira syringaria*. 49=48+1 (NFa: F 4=4+0, G 2=2+0, J 6=6+0, K 1=1+0, L 1=1+0. NFb: F 1=1+0, G 1=1+0, J 2=2+0, K 3=3+0, L 2=2+0. SFa: F 2=2+0, K 2=2+0, L 1=1+0. SFb: F 2=2+0, G 1=1+0, J 2=2+0, K 5=5+0, L 2=2+0. WAa: G 2=2+0, J 1=1+0, K 1=0+1, L 1=1+0. WAb: G 3=3+0, J 1=1+0.)
371. *Garaeus parva distans*. 23=23+0 (NFa: M 9=9+0, N 1=1+0. NFb: M 2=2+0. SFa: M 1=1+0, P 1=1+0. SFb: M 5=5+0. WAa: M 1=1+0. WAb: M 1=1+0, N 1=1+0. LAa: N 1=1+0.)
- \* 372. *Garaeus mirandus mirandus*. 21=16+5 (NFa: I 1=0+1. SFa: E 2=0+2. WAa: E 1=1+0. WAb: E 6=6+0. LAa: C 1=1+0, D 2=2+0, E 3=2+1, I 2=2+0, J 1=1+0. LAb: E 2=1+1.)
- \*\* 373. *Garaeus specularis mactans*. 140=110+30 (NFa: I 16=16+0, J 6=6+0, L 6=5+1, M 4=3+1, N 3=1+2, O 2=1+1. NFb: I 5=5+0, J 4=4+0, K 1=1+0, L 3=2+1, M 1=0+1, N 3=2+1. SFa: I 2=2+0, J 5=5+0, K 3=2+1, L 5=3+2. SFb: J 3=2+1, K 1=1+0, L 4=1+3, M 1=0+1, N 1=1+0. WAa: I 4=4+0, J 8=7+1, K 1=1+0, L 4=1+3, M 2=1+1, N 1=1+0. WAb: I 1=1+0, J 7=6+1, K 1=0+1, M 4=1+3, N 3=1+2, O 2=2+0. LAa: I 2=2+0, J 7=7+0, K 5=4+1, L 2=1+1. LAb: I 1=1+0, J 4=4+0, K 2=2+0.)
- \* 374. *Endropiodes indictinaria indictinaria*. 59=51+8 (NFa: C 1=1+0, D 6=6+0, E 1=1+0, H 11=10+1, I 7=6+1. NFb: D 1=1+0, E 1=1+0, I 3=2+1, N 5=2+3. SFa: C 1=1+0, E 5=5+0, I 1=1+0. SFb: C 1=1+0, E 1=1+0, I 1=1+0. WAa: D 1=1+0, I 1=0+1. WAb: C 1=1+0, D 1=1+0, I 2=2+0, N 2=1+1. LAa: D 2=2+0, E 1=1+0, N 1=1+0. LAb: E 1=1+0.)
375. *Plagodis dolabraria*. 6=6+0 (NFa: D 1=1+0. SFa: E 1=1+0. WAb: D 2=2+0, E 1=1+0. LAa: D 1=1+0.)
376. *Lithina chlorosata*. 4=4+0 (NFa: D 3=3+0. SFb: B 1=1+0.)

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377. *Narosioideus flavidorsalis*. 27=27+0 (NFa: F 4=4+0, G 3=3+0. NFb: F 12=12+0. SFa: G 1=1+0. SFb: F 1=1+0. WAa: F 1=1+0, G 1=1+0. WAb: F 2=2+0, G 2=2+0.)
378. *Parasa sinica*. 14=14+0 (NFa: F 7=7+0. SFa: F 3=3+0. SFb: F 1=1+0. WAb: F 1=1+0, G 1=1+0. LAa: F 1=1+0.)
379. *Cnidocampa flavescens*. 4=4+0 (NFa: F 2=2+0. SFa: F 1=1+0. SFb: F 1=1+0.)
380. *Apoda dentatus*. 2=2+0 (NFa: F 2=2+0.)