

成田空港で輸入植物から発見されたチョウ目・追補2

高橋 学・吉田優二・金 浩史*・北村 寿

横浜植物防疫所成田支所

Additional list of Lepidoptera intercepted at plant quarantine of Narita Airport in Japan, II. Gaku TAKAHASHI, Yuji YOSHIDA, Hiroshi KON and Hisashi KITAMURA (Yokohama Plant Protection Station Narita Branch, P. O. Box 2209, Terminal 2, Narita Airport, Narita City 282-0004, Japan). *Res. Bull. Pl. Prot. Japan* 39: 93-102 (2003).

Abstract: Additional list of the Lepidoptera intercepted at Narita Airport in Japan on import plant quarantine inspection (1997-2001) was given. A total of 85 species belonging to 16 families are listed.

Key words: Lepidoptera, plant quarantine, intercept, list

はじめに

成田空港に輸入された生鮮野菜・果実、切り花及び栽植用植物から発見されるチョウ目の種名等を明らかにし、これらを取りまとめた報告は、TOKIHIRO (1998) による1993年から1996年までの4年間分の発見記録が最初である。著者らは、それに続く1997年から2001年までの5年間分について種名等を明らかにするための調査を行い、属名まで判明した4種を含む16科57属85種の発見記録を取りまとめたので報告する。

なお、本文に先立ち、同定をお願いした農業環境技術研究所の安田耕司氏（アトヒゲコガ科・カザリバガ科）、同じく吉松慎一氏（ヤガ科）、岩手県の奥 俊夫氏（ツツミノガ科）、新潟県の佐藤力夫氏（シャクガ科）及び大阪府中央農業技術指導室の那須義次氏（ハマキガ科）、並びに標本の収集や飼育にご協力いただいた当所植物防疫官の各位に心から御礼申し上げる。

材料及び方法

当所において、生鮮野菜・果実、切り花及び栽植用植物等の生植物の輸入貨物から発見されたチョウ目を対象とした。発見個体の大部分は、卵、幼虫あるいは蛹態で発見されたため、同定作業の必要に応じて成虫が羽化するまで飼育を行った。当所で同定できなかった個体の一部については、標本を専門家に送付して同定を依頼した。本報告で取り扱った標本は、基本的に

TOKIHIRO (1998) と同様に当所において保管されている。

結果及び考察

今回の調査で種名が明らかとなった個々の種類について、学名、発見時の態、付着植物及び輸出国名を以下に示した。専門家の同定によって種名等が判明したものは、学名の後に*印を付し、印がないものは、著者らが同定した。また、本報告で新たに種名が判明したチョウ目のうち、輸入植物検疫において発見頻度又は重要度が高いと思われる種を中心として成虫標本を示した (Fig. 1)。

次に、今後の参考とするため、TOKIHIRO (1998) 及び本報告の両方の発見記録から種名まで判明した種類を抜き出し、表に整理した (Table 1)。その結果、両報告から合計100種及び2亜種が記録され、その半数以上の57種及び1亜種は国内未発生であった。また、両方に共通する30種を除いた70種がどちらか片方の報告だけで記録されており、今後もさらに多くの種類が記録されると思われる。

Family Acrolepiidae アトヒゲコガ科

Acrolepiopsis assectella (ZELLER)*¹

Stage: Larva, on *Allium ampeloprasum* (Liliaceae).

Origin: France.

Family Arctiidae ヒトリガ科

Estigmene acrea (DRURY) キシタゴマダラヒトリ

* 現在、横浜植物防疫所札幌支所釧路出張所

- Stage: Egg and Larva, on *Lactuca sativa* (Compositae), *Asparagus officinalis* (Liliaceae) and *Coriandrum sativum* (Umbelliferae).
Origin: U.S.A., Mexico.
- Hypercompe scribonia* (STOLL)
Stage: Larva, on *Citrus latifolia* (Rutaceae).
Origin: Mexico.
- Family Coleophoridae ツツミノガ科
Coleophora versurella ZELLER アオビユツツミノガ*2
Stage: Larva, on *Asparagus officinalis* (Liliaceae).
Origin: New Zealand.
- Family Cosmopterigidae カザリバガ科
Anatrachyntis sp.*1
Stage: Larva and Pupa, on *Capsicum annuum* (Solanaceae).
Origin: New Zealand.
- Family Geometridae シャクガ科
Chiasmia elenora paranora (HOLLOWAY)*3
Stage: Larva, on *Leucaena glauca* (Leguminosae).
Origin: Thailand.
- Gymnoscelis rufifasciata* (HAWORTH)*3
Stage: Larva, on *Craspedia* sp. (Compositae).
Origin: Italy.
- Peribatodes rhomboidaria* (DENIS & SCHIFFERMÜLLER)*3
Stage: Larva, on *Euphorbia* sp. (Euphorbiaceae).
Origin: Germany.
- Family Hesperidae セセリチョウ科
Erionota torus (EVANS) パナナセセリ
Stage: Egg, on *Musa* spp. (Musaceae).
Origin: Thailand.
- Family Lycaenidae シジミチョウ科
Jamides alecto (C. FELDER) シロウラナミシジミ
Stage: Larva and Pupa, on *Zingiber* sp. (Zingiberaceae).
Origin: Philippines.
- Lampides boeticus* (LINNAEUS) ウラナミシジミ
Stage: Larva, on *Dolichos lablab*, *Phaseolus vulgaris*, *Pisum sativum*, *Psophocarpus tetragonolobus* (Leguminosae) and *Capsicum annuum* (Solanaceae).
Origin: China, Thailand, United Arab, New Zealand.
- Family Noctuidae ヤガ科
Strymon melinus HÜBNER
Stage: Larva, on *Phaseolus vulgaris* (Leguminosae).
Origin: U.S.A. (California).
- Agrotis infusa* (BOISDUVAL)*4
Stage: Egg and Larva, on *Brassica* sp. (Cruciferae).
Origin: Australia.
- Agrotis ipsilon* (HUFNAGEL) タマナヤガ
Stage: Adult and Egg, on *Lactuca sativa* (Compositae) and *Coriandrum sativum* (Umbelliferae).
Origin: China, U.S.A.
- Agrotis munda* WALKER
Stage: Adult, on *Asparagus officinalis* (Liliaceae).
Origin: Australia.
- Agrotis subterranea* (FABRICIUS)
Stage: Larva, on *Apium graveolens* (Umbelliferae).
Origin: U.S.A.
- Autographa californica* (SPEYER)
Stage: Adult, Egg and Larva, on *Lactuca sativa* (Compositae), *Brassica juncea*, *Brassica oleracea* (Cruciferae) and *Apium graveolens* (Umbelliferae).
Origin: U.S.A.
- Autographa gamma* (LINNAEUS) ガマキンウワバ
Stage: Egg, Larva and Pupa on *Cichorium intybus*, *Cynara scolymus*, (Compositae) and *Pelargonium* spp. (Geraniaceae).
Origin: Italy, Netherlands, Germany, France.
- Autographa nigrisigna* (WALKER) タマナギンウワバ
Stage: Egg and Larva, on *Brassica oleracea* (Cruciferae) and *Perilla frutescens* (Labiatae).
Origin: China.
- Chrysodeixis acuta* (WALKER) ホソバネキンウワバ
Stage: Egg, Larva and Pupa, on *Ocimum basilicum*, *O. sanctum* (Labiatae), *Cassia siamea* (Leguminosae) and *Sandersonia aurantiaca* (Liliaceae).
Origin: Indonesia, Thailand.
- Chrysodeixis chalcites* (ESPER)
Stage: Larva and Pupa, on *Cucurbita pepo* (Cucurbitaceae), *Dioscorea* sp. (Dioscoreaceae), *Pelargonium* spp. (Geraniaceae), *Pittosporum tenuifolium*

- (Pittosporaceae), *Capsicum annuum* and *Lycopersicon esculentum* (Solanaceae).
Origin: Italy, Netherlands, Germany.
- Chrysodeixis eriosoma* (DOUBLEDAY) イチジクキンウワバ
Stage: Larva and Pupa, on *Leucadendron* spp. (Proteaceae) and *Cymbidium* spp. (Orchidaceae).
Origin: Australia, New Zealand.
- Chrysodeixis includens* (WALKER)
Stage: Pupa, on *Rumohra adiantiformis* (Aspidiaceae).
Origin: U.S.A.
- Copitarsia turbata* (HERRICH-SCHÄFFER)*⁴
Stage: Egg and Larva, on *Dianthus caryophyllus* (Caryophyllaceae), *Asparagus officinalis* (Liliaceae), *Averrhoa carambola* (Oxalidaceae) and *Rubus idaeus* (Rosaceae).
Origin: Mexico, Colombia, Chile, Peru.
- Dargida procincta* (GROTE)
Stage: Egg, on *Vaccinium corymbosum* (Ericaceae).
Origin: U.S.A. (Oregon).
- Earias cupreoviridis* (WALKER) ワタリンガ
Stage: Egg and Larva, on *Abelmoschus esculentus* (Malvaceae).
Origin: Thailand.
- Earias insulana* (BOISDUVAL) ミスジアオリング
Stage: Egg and Larva, on *Abelmoschus esculentus* (Malvaceae).
Origin: Thailand.
- Earias vittella* (FABRICIUS) クサオピリンガ
Stage: Egg and Larva, on *Abelmoschus esculentus* (Malvaceae).
Origin: Philippines, Thailand.
- Helicoverpa armigera* (HÜBNER) オオタバコガ
Stage: Egg and Larva, on *Chrysanthemum morifolium*, *Cynara scolymus*, *Lactuca sativa* (Compositae), Brassica oleracea (Cruciferae), *Vaccinium corymbosum* (Ericaceae), *Zea mays* (Gramineae), *Cassia siamea*, *Phaseolus vulgaris*, *Pisum sativum* (Leguminosae), *Asparagus officinalis*, *Smilax* sp. (Liliaceae), *Abelmoschus esculentus* (Malvaceae), *Dendrobium* spp., *Oncidium* spp. (Orchidaceae), *Rosa* spp. (Rosaceae) and *Capsicum annuum* (Solanaceae).
Origin: Korea, Taiwan, China, India, Indonesia, Singapore, Sri Lanka, Thailand, Philippines, Vietnam, Malaysia, Oman, Turkey, Italy, France, Zimbabwe, South Africa, Australia, New Zealand.
- Helicoverpa assulta* (GUENÉE) タバコガ
Stage: Larva, on *Capsicum annuum* (Solanaceae).
Origin: Korea.
- Helicoverpa punctigera* (WALLENGREN)
Stage: Egg and Larva, on *Ptilotus* sp. (Amaranthaceae), *Brassica* sp. (Cruciferae), *Zea mays* (Gramineae) and *Asparagus officinalis* (Liliaceae).
Origin: Australia.
- Helicoverpa zea* (BODDIE) アメリカタバコガ
Stage: Egg and Larva, on *Cichorium intybus*, *Lactuca sativa* (Compositae), *Zea mays* (Gramineae), *Phaseolus vulgaris* (Leguminosae), *Asparagus officinalis* (Liliaceae) and *Abelmoschus esculentus* (Malvaceae).
Origin: U.S.A., Mexico.
- Heliothis maritima* GRASLIN ツメクサガ
Stage: Adult and Egg, on *Brassica rapa* (Cruciferae) and *Coriandrum sativum* (Umbelliferae).
Origin: China.
- Heliothis peltigera* (Denis & Schiffermüller)
Stage: Larva, on *Rosmarinus officinalis* (Labiatae).
Origin: Israel.
- Heliothis virescens* (FABRICIUS) ニセアメリカタバコガ
Stage: Egg and Larva, on *Vaccinium corymbosum* (Ericaceae), *Phaseolus vulgaris* (Leguminosae), *Asparagus officinalis* (Liliaceae) and *Abelmoschus esculentus* (Malvaceae).
Origin: U.S.A., Mexico, Peru.
- Mamestra brassicae* (LINNAEUS) ヨトウガ
Stage: Egg and Larva, on *Mesembryanthemum crystallinum* (Aizoaceae), *Brassica chinensis*, *B. oleracea*, *B. rapa* (Cruciferae) and *Cucurbita pepo* (Cucurbitaceae).
Origin: China, Netherlands, France.
- Mamestra configurata* WALKER
Stage: Egg and Larva, on *Coriandrum sativum* (Umbelliferae).
Origin: U.S.A.
- Mythimna unipuncta* (HAWORTH) アメリカキヨトウ*⁴

- Stage: Egg, on *Coriandrum sativum* (Umbelliferae).
Origin: U.S.A.
- Peridroma saucia* (HÜBNER) ニセタマナヤガ
Stage: Adult, Egg and Larva, on *Rumohra adiantiformis* (Aspidiaceae), *Viburnum opulus* (Caprifoliaceae), *Cichorium intybus*, *Lactuca sativa* (Compositae), *Brassica juncea*, *B. oleracea* (Cruciferae), *Lilium* spp. (Liliaceae), *Pittosporum tenuifolium* (Pittosporaceae) and *Fragaria* × *ananassa* (Rosaceae).
Origin: Korea, Italy, U.S.A., Costa Rica, New Zealand.
- Phlogophora meticulosa* (LINNAEUS)
Stage: Larva, on *Cynara scolymus* (Compositae) and *Brassica oleracea* (Cruciferae).
Origin: Italy, Netherlands, France.
- Spodoptera albula* (WALKER)
Stage: Larva, on *Thymus vulgaris* (Labiatae).
Origin: Mexico.
- Spodoptera exempta* (WALKER) アフリカシロナヨトウ
Stage: Egg, on *Anigozanthos* spp. (Haemodraceae).
Origin: Zimbabwe.
- Spodoptera exigua* (HÜBNER) シロイチモジヨトウ
Stage: Egg and Larva, on *Chrysanthemum morifolium*, *Cichorium endivia*, *Cynara scolymus*, *Lactuca sativa* (Compositae), *Brassica chinensis*, *B. juncea*, *B. oleracea*, *B. rapa* (Cruciferae), *Ocimum basilicum*, *O. sanctum*, *Perilla frutescens* (Labiatae), *Phaseolus vulgaris*, *Pisum sativum* (Leguminosae), *Allium tuberosum*, *Asparagus officinalis* (Liliaceae), *Abelmoschus esculentus* (Malvaceae), *Dendrobium* spp., *Oncidium* spp. (Orchidaceae), *Rosa* spp. (Rosaceae), *Capsicum annuum* (Solanaceae) and *Coriandrum sativum* (Umbelliferae).
Origin: Taiwan, China, India, Singapore, Thailand, Philippines, Vietnam, Malaysia, Oman, Saudi Arabia, Italy, Spain, U.S.A., Mexico.
- Spodoptera frugiperda* (J. E. SMITH) ツマジロクサヨトウ
Stage: Egg and Larva, on *Tillandsia* sp. (Bromeliaceae), *Zea mays* (Gramineae), *Asparagus officinalis* (Liliaceae) and *Fragaria* × *ananassa* (Rosaceae).
Origin: Mexico, Guatemala, Peru.
- Spodoptera hipparis* (DRUCE)
Stage: Larva, on *Asparagus officinalis* (Liliaceae).
Origin: Mexico.
- Spodoptera latifascia* (WALKER)
Stage: Larva, on *Oncidium* spp. (Orchidaceae).
Origin: Brazil.
- Spodoptera littoralis* (BOISDUVAL)
Stage: Egg and Larva, on *Anthurium andraeanum* (Araceae), *Beta vulgaris* (Chenopodiaceae), *Rosmarinus officinalis* (Labiatae), *Prunus* sp. (Rosaceae), *Bupleurum* spp., *Eryngium* spp., *Foeniculum vulgare* (Umbelliferae).
Origin: Israel, Italy, Zimbabwe, Mauritius.
- Spodoptera litura* (FABRICIUS) ハスモンヨトウ
Stage: Adult, Egg and Larva, on *Anthurium andraeanum* (Araceae), *Chrysanthemum morifolium*, *Lactuca sativa* (Compositae), *Brassica chinensis*, *B. oleracea*, *B. rapa* (Cruciferae), *Ocimum basilicum*, *O. sanctum*, *Perilla frutescens* (Labiatae), *Phaseolus vulgaris*, *Pisum sativum* (Leguminosae), *Allium tuberosum*, *Asparagus officinalis*, *Lilium* spp. (Liliaceae), *Abelmoschus esculentus* (Malvaceae), *Marsilea crenata* (Marsileaceae), *Cymbidium* spp., *Dendrobium* spp., *Oncidium* spp. (Orchidaceae), *Rosa* spp. (Rosaceae), *Citrus unshiu* (Rutaceae), *Capsicum annuum* (Solanaceae), *Coriandrum sativum* and *Eryngium foetidum* (Umbelliferae).
Origin: Korea, Taiwan, China, India, Indonesia, Singapore, Sri Lanka, Thailand, Philippines, Vietnam, Malaysia, Australia, New Zealand.
- Spodoptera ochrea* (HAMPSON)
Stage: Egg and Larva, on *Asparagus officinalis* (Liliaceae).
Origin: Peru.
- Spodoptera ornithogalli* (GUENÉE) アメリカハスモンヨトウ
Stage: Egg and Larva, on *Lactuca sativa* (Compositae) and *Asparagus officinalis* (Liliaceae).
Origin: U.S.A., Mexico.
- Spodoptera praefica* (GROTE)
Stage: Egg and Larva, on *Cichorium endivia*, *Lactuca sativa* (Compositae) and *Asparagus officinalis* (Liliaceae).
Origin: U.S.A. (California).
- Thysanoplusia orichalcea* (FABRICIUS) ネットタイキ

クキンウワバ

Stage: Egg and Larva, on *Chrysanthemum morifolium*, *Lactuca sativa*, *Solidago* sp. (Compositae), *Brassica* sp. (Cruciferae) and *Pisum sativum* (Leguminosae).

Origin: Taiwan, China, Zimbabwe, Australia.

Tiicola aureata HOLLOWAY*⁴ ヤクシマヨトウ

Stage: Larva, on *Oncidium* Gower Ramsey (Orchidaceae).

Origin: Taiwan.

Trichoptusia ni (HÜBNER) イラクサギンウワバ

Stage: Egg and Larva, on *Lactuca sativa* (Compositae), *Brassica oleracea* (Cruciferae), *Ocimum basilicum* and *O. sanctum* (Labiatae),

Origin: Thailand, U.S.A.

Family Nymphalidae タテハチョウ科

Cynthia cardui (LINNAEUS) ヒメアカタテハ

Stage: Pupa, on *Rosmarinus officinalis* (Labiatae).

Origin: Israel.

Junonia atlites (LINNAEUS) ハイイロタテハモドキ

Stage: Larva, on *Limnophila chinensis* (Scrophulariaceae).

Origin: Thailand.

Family Papilionidae アゲハチョウ科

Papilio demoleus (LINNAEUS) オナシアゲハ

Stage: Larva, on *Citrus hystrix* (Rutaceae).

Origin: Thailand.

Family Pieridae シロチョウ科

Catopsilia pomona (FABRICIUS) ウスキシロチョウ

Stage: Larva, on *Cassia siamea* (Leguminosae).

Origin: Thailand.

Pieris rapae (LINNAEUS) モンシロチョウ

Stage: Egg and Larva, on *Brassica chinensis*, *B. oleracea* and *B. rapa* (Cruciferae).

Origin: China.

Pieris rapae rapae (LINNAEUS) モンシロチョウ *rapae* 亜種

Stage: Egg and Larva, on *Brassica juncea*, *B. oleracea* and *B. sp.* (Cruciferae).

Origin: Netherlands, France, U.S.A., Australia.

Pieris rapae crucivora (BOISDUVAL) モンシロチョウ *crucivora* 亜種

Stage: Egg, Larva and Pupa, on *Asplenium* sp.

(Aspleniaceae) and *Brassica oleracea* (Cruciferae).

Origin: Taiwan.

Pontia daplidice (LINNAEUS) チョウセンシロチョウ

Stage: Egg and Larva, on *Brassica oleracea* (Cruciferae).

Origin: China.

Family Pterophoridae トリバガ科

Platyptilia carduidactyla (RILEY)

Stage: Larva, on *Cynara scolymus* (Compositae).

Origin: U.S.A. (California).

Family Pyralidae メイガ科

Amyelois transitella (WALKER) クルミマダラメイガ

Stage: Larva, on *Punica granatum* (Punicaceae).

Origin: U.S.A. (California).

Calgua defiguralis WALKER ウスアカムラサキマダラメイガ

Stage: Larva, on *Parkia speciosa* (Leguminosae).

Origin: Thailand.

Chilo auricilius DODGEONY

Stage: Larva, on *Cymbopogon citratus* (Gramineae).

Origin: Thailand.

Crocidolomia pavonana (FABRICIUS) ケブカノメイガ

Stage: Larva, on *Raphanus sativus* (Cruciferae).

Origin: Thailand.

Diaphania indica (SAUNDERS) ワタヘリクロノメイガ

Stage: Larva, on *Cucurbita pepo* (Cucurbitaceae).

Origin: Korea.

Diaphania nitidalis (STOLL) アメリカウリノメイガ

Stage: Larva, on *Cucumis melo* and *Cucurbita pepo* (Cucurbitaceae).

Origin: Mexico.

Hellula undalis (FABRICIUS) ハイマダラノメイガ

Stage: Larva, on *Brassica oleracea* and *Raphanus sativus* (Cruciferae).

Origin: Thailand.

Hendecasis duplifascialis HAMPSON

Stage: Larva, on *Jasminum sambac* (Oleaceae).

Origin: Thailand.

Leucinodes orbonalis GUENÉE ナスノメイガ

Stage: Larva, on *Solanum* sp. (Solanaceae).

Origin: Thailand.

Maruca vitrata (FABRICIUS) マメノメイガ

Stage: Larva, on *Phaseolus vulgaris*, *Psophocarpus tetragonolobus* and *Sesbania grandiflora* (Leguminosae).

Origin: Thailand, Oman.

Ostrinia furnacalis (GUENÉE) アワノメイガ

Stage: Larva, on *Zea mays* (Gramineae) and *Abelmoschus esculentus* (Malvaceae).

Origin: China, Thailand, Philippines.

Ostrinia nubilalis (HÜBNER)

Stage: Larva, on *Cynara cardunculus* (Compositae).

Origin: Italy.

Pyrausta panopealis (WALKER) ベニフキノメイガ

Stage: Larva, on *Perilla ocimoides* (Labiatae).

Origin: Korea.

Spoladea recurvalis (FABRICIUS) シロオビノメイガ

Stage: Larva, on *Ocimum sanctum* (Labiatae).

Origin: Thailand.

Family Sphingidae スズメガ科

Macroglossum prometheus (BOISDUVAL)*4

Stage: Egg, on *Morinda citrifolia* (Rubiaceae).

Origin: Thailand.

Family Tortricidae ハマキガ科

Archips micaceana (WALKER)

Stage: Larva, on *Sauropus androgynus* (Euphorbiaceae), *Cassia siamea* (Leguminosae) and *Dendrobium* spp. (Orchidaceae).

Origin: Thailand.

Cacoecimorpha pronubana (HÜBNER)

Stage: Adult, Egg, Larva and Pupa, on *Cynara scolymus* (Compositae), *Danae racemosa* (Liliaceae), *Eucalyptus* sp. (Myrtaceae) and *Capsicum annuum* (Solanaceae).

Origin: Italy, Netherlands, France.

Clepsia spectrana (TREITSCHKE)

Stage: Egg and Larva, on *Vaccinium corymbosum* (Ericaceae), *Rheum rhabarbarum* (Polygonaceae), *Capsicum annuum* (Solanaceae) and *Foeniculum vulgare* (Umbelliferae).

Origin: Italy, Netherlands, Canada (British Columbia).

Ctenopseustis sp.

Stage: Larva, on *Diospyros kaki* (Ebenaceae),

Cymbidium spp. (Orchidaceae) and *Capsicum annuum* (Solanaceae).

Origin: New Zealand.

Cydia sp.*5

Stage: Larva, on *Litchi chinensis* (Dactylocladus).

Origin: Mexico.

Epiphyas postvittana (WALKER) リンゴウスチャイロハマキ*1

Stage: Adult, Egg, Larva and Pupa, on *Cucumis melo* (Cucurbitaceae), *Diospyros kaki* (Ebenaceae), *Vaccinium corymbosum* (Ericaceae), *Hypericum androsaemum* (Guttiferae), *Asparagus officinalis*, *Sandersonia aurantiaca* (Liliaceae), *Feijoa sellowiana*, *Lophomyrtus* spp. (Myrtaceae), *Cymbidium* spp. (Orchidaceae), *Leucadendron* spp. (Proteaceae), *Fragaria* × *ananassa* (Rosaceae), *Boronia* spp., *Citrus unshiu* (Rutaceae), *Ribes nigrum*, *R. rubrum* (Saxifragaceae) and *Capsicum annuum* (Solanaceae).

Origin: Australia, New Zealand.

Gatesclarkeana sp.*5

Stage: Larva, on *Cassia siamea* (Leguminosae).

Origin: Thailand.

Loboschiza koenigana (FABRICIUS) センダンヒメハマキ

Stage: Larva, on *Azadirachta indica* (Meliaceae).

Origin: Thailand.

Family Yponomeutidae スガ科

Plutella xylostella (LINNAEUS) コナガ

Stage: Adult, Egg, Larva and Pupa, on *Brassica chinensis*, *B. juncea*, *B. oleracea*, *B. rapa*, *Eruca sativa*, *Raphanus sativus* (Cruciferae), *Perilla frutescens* (Labiatae), *Pisum sativum* (Leguminosae) and *Asparagus officinalis* (Liliaceae).

Origin: Taiwan, China, Thailand, Australia, Italy, Netherlands, U.S.A.

Part of material identified by

*1 K. YASUDA.

*2 T. OKU.

*3 R. SATO.

*4 S. YOSHIMATSU.

*5 Y. NASU.

参 考 文 献

- BARLOW, H. S. (1982) An introduction to the moths of South East Asia. The Malayan Nature Society. Kuala Lumpur, Malaysia, 305 pp., 50 plates.
- BERIO, E. (1991) Comitato Scientifico Per La Fauna D'Italia Lepidoptera Noctuidae. II. Italy, 708 pp., 16 plates.
- BROWN, E. S. and C. F. DEWHURST (1975) The genus *Spodoptera* (Lepidoptera, Noctuidae) in Africa and the Near East. *Bull. Entomol. Res.* **65**: 221-262, 3 plates.
- CAPINERA, J. L. (2001) Handbook of vegetable pests. Academic Press. San Diego, U.S.A., 729 pp.
- CARTER, D. J. (1992) Butterflies and moths. Dorling Kindersley Limited. London, 304 pp.
- CARTER, D. J. (1984) Pest Lepidoptera of Europe. Dr. W. Junk. Dordrecht, Netherlands, 431 pp.
- CASTILLO, E. E. and A. O. ANGULO (1991) Contribution to the knowledge of the genus *Copitarsia* HAMPSON, 1906 (Lepidoptera: Glossata: Cucullinae). *Gayana Zool.* **55**: 227-246. [In Spanish.]
- CHOU, I. (1994) Monograph of Chinese butterflies. Henan Scientific and Technological Publishing House. China. [In Chinese.]
- COMMON, I. F. B. (1958) The Australian cutworms of the genus *Agrotis* (Lepidoptera: Noctuidae). *Aust. J. Zool.* **6**: 69-88.
- DUGDALE, J. S. (1990) Reassessment of *Ctenopseustis* Meyrick and *Planotortrix* Dugdale with descriptions of two new genera (Lepidoptera: Tortricidae). *N. Z. J. Zool.* **17**: 437-465.
- ELIOT, J. N. (1992) The butterflies of the Malay Peninsula. Malayan Nature Society. Kuala Lumpur, Malaysia, 595 pp., 69 plates.
- EUCHLIN, T. D. and H. B. CUNNINGHAM (1978) The Plusiinae (Lepidoptera: Noctuidae) of America North of Mexico, Emphasizing genitalic and larval morphology. USDA Technical Bulletin No. 1567. U.S.A., 182 pp.
- HARDWICK, D. F. (1965) The corn earworm complex. *Mem. ent. Soc. Canada* **40**, 247, pp., 146 figures.
- HODGES, R. W., T. DOMINICK, D. R. DAVIS, D. C. FERGUSON, J. G. FRANCLEMONT, E. G. MUNROE and J. A. POWELL (1983) Check list of the Lepidoptera of America North of Mexico. Classey Ltd. Faringdon, U.K., 248 pp.
- HOLLAND, W. J. (1968) The moth book. Dover Publications. New York, U.S.A., 479 pp.
- HOLLOWAY, J. D. (1985) The moths of Borneo. *The Malayan Nature Journal* **38**: 157-317.
- HOLLOWAY, J. D. (1989) The moths of Borneo. *The Malayan Nature Journal* **42**: 57-228.
- INOUE, H., S. SUGI, H. KUROKO, S. MORIUTI and A. KAWABE (1982) moths of Japan. Vol. 1. Kodansya. Tokyo, Japan, 966 pp. Vol. 2. Kodansya. Tokyo, Japan, 552, pp., 392 plates. [In Japanese.]
- KITCHING, I. J. and J. M. CADIOU (2000) Hawkmoths of the World: An annotated and illustrated revisionary checklist (Lepidoptera: Sphingidae): The Natural History Museum. Cornell University Press. Ithaca, U.S.A., 256 pp.
- MATTHEWS, M. (1999) Heliiothine moths of Australia. CSIRO Publishing. Collingwood, Australia, 320 pp.
- MEDVEDEV, G. S. (1989) Keys to the Insects of the European Part of the USSR. Volume IV: Lepidoptera: part I. The Institute of Zoology Academy of Sciences of the USSR. E. J. Brill. Leiden, Netherlands.
- MUTUURA, A. and E. MUNROE (1970) Taxonomy and distribution of the European corn borer and allied species: Genus *Ostrinia* (Lepidoptera: Pyralidae). *Mem. ent. Soc. Canada* **71**: 1-71.
- NIELSEN, E. S., E. D. EDWARDS and T. V. RANGAI (1996) Checklist of the Lepidoptera of Australia. CSIRO Publishing. Collingwood, Australia, 529 pp.
- ROBINSON, G. S., K. R. TUCK and M. SHAFFER (1994) A field guide to the smaller moths of South-East Asia. Malaysian Nature Society. Kuala Lumpur, Malaysia, 308 pp.
- SHIROZU, T. (1960) Butterflies of Formosa in colour. Hoikusya. Osaka, Japan, 481 pp., 76 plates. [In Japanese.]
- TODD, E. L., and R. W. POOLE (1980) Keys and illustrations for the armyworm moths of the Noctuid genus *Spodoptera* Guenée from the Western Hemisphere. *Ann. Entomol. Soc. Am.* **73**: 722-738.
- TOKIHIRO, G. (1998) A list of Lepidopterous insects on imported plants at Narita Airport. *Res. Bull. Pl. Prot. Japan* **34**: 81-88. [In Japanese.]
- ZIMMERMAN, C. (1958) Insects of Hawaii, Vol. 7: Macrolepidoptera. University of Hawaii Press. Honolulu, U.S.A., 542 pp.
- ZIMMERMAN, C. (1978) Insects of Hawaii, Vol. 9: Microlepidoptera. University of Hawaii Press. Honolulu, U.S.A., 1044 pp.

Table 1. Lepidoptera species intercepted at import plant quarantine of Narita Airport in Japan.

No.	Family	Lepidoptera species		Intercepted in 1993-1996 ^a	Intercepted in 1997-2001 ^b
1	Acrolepiidae	アトヒゲコガ科	* <i>Acrolepiopsis assectella</i> (ZELLER)		○
2	Arctiidae	ヒトリガ科	* <i>Estigmene acrea</i> (DRURY)	キシタゴマダラヒトリ	○
3			* <i>Hypercompe scribonia</i> (STOLL)		○
4	Coleophoridae	ツツミノガ科	<i>Coleophora versurella</i> ZELLER	アオビコツツミノガ	○
5	Cosmopterigidae	カザリバガ科	* <i>Anatrachyntis badia</i> (HODGES)		○
6	Gelechiidae	キバガ科	<i>Phthorimaea operculella</i> (ZELLER)	ジャガイモガ	○
7	Geometridae	シャクガ科	* <i>Chiasmia elenora paranora</i> (HOLLOWAY)		○
8			* <i>Gymnoscelis rufifasciata</i> (HAWORTH)		○
9			* <i>Peribatodes rhomboidaria</i> (DENIS & SCHIFFERMÜLLER)		○
10			<i>Semiothisa vegabunda</i> (INOUE)	ギンネムエダシャク	○
11	Hesperiidae	セセリチョウ科	<i>Erionota torus</i> (EVANS)	バナナセセリ	○
12	Lycaenidae	シジミチョウ科	* <i>Jamides alecto</i> (C. FELDER)	シロウラナシジミ	○
13			<i>Lampides boeticus</i> (LINNAEUS)	ウラナシジミ	○
14			* <i>Strymon melinus</i> HÜBNER		○
15	Lymantriidae	ドクガ科	* <i>Altha adala</i> (MOORE)		○
16	Noctuidae	ヤガ科	* <i>Agrotis infusa</i> (BOISDUVAL)		○
17			<i>Agrotis ipsilon</i> (HUFNAGEL)	タマナヤガ	○
18			* <i>Agrotis munda</i> WALKER		○
19			* <i>Agrotis subterranea</i> (FABRICIUS)		○
20			<i>Anapamea cuneatoides</i> POOLE	カバマダラヨトウ	○
21			<i>Anomis involuta</i> (WALKER)	ヒメアカキリバ	○
22			* <i>Arthisma scissuralis</i> Moore		○
23			* <i>Autographa californica</i> (SPEYER)		○
24			<i>Autographa gamma</i> (LINNAEUS)	ガマキンウワバ	○
25			<i>Autographa nigrisigna</i> (WALKER)	タマナギンウワバ	○
26			<i>Chrysodeixis acuta</i> (WALKER)	ホソバナネキンウワバ	○
27			* <i>Chrysodeixis argentifera</i> (GUENÉE)		○
28			* <i>Chrysodeixis chalcites</i> (ESPER)		○
29			<i>Chrysodeixis eriosoma</i> (Doubleday)	イチジクキンウワバ	○
30			* <i>Chrysodeixis includens</i> (WALKER)		○
31			* <i>Copitarsia turbata</i> (HERRICH-SCHÄFFER)		○
32			* <i>Dargida procincta</i> (GROTE)		○
33			<i>Earias cupreoviridis</i> (WALKER)	ワタリンガ	○
34			<i>Earias insulana</i> (BOISDUVAL)	ミスジアオリンガ	○
35			<i>Earias vittella</i> (FABRICIUS)	クサオビリンガ	○
36			<i>Helicoverpa armigera</i> (HÜBNER)	オオタバコガ	○
37			<i>Helicoverpa assulta</i> (GUENÉE)	タバコガ	○
38			* <i>Helicoverpa punctigera</i> (WALLENGREN)		○
39			* <i>Helicoverpa zea</i> (BODDIE)	アメリカタバコガ	○
40			<i>Heliiothis maritima</i> GRASLIN	ツメクサガ	○
41			* <i>Heliiothis peltigera</i> (DENIS & SCHIFFERMÜLLER)		○
42			* <i>Heliiothis virescens</i> (FABRICIUS)	ニセアメリカタバコガ	○
43			<i>Mamestra brassicae</i> (LINNAEUS)	ヨトウガ	○
44			* <i>Mamestra configurata</i> WALKER		○
45			* <i>Mythimna unipuncta</i> (HAWORTH)	アメリカキヨトウ	○
46			<i>Peridroma saucia</i> (HUBNER)	ニセタマナヤガ	○
47			* <i>Phlogophora meticulosa</i> (LINNAEUS)		○
48			<i>Simplicia caeneusalis</i> (WALKER)	リュウキュウアカマエツバ	○
49			* <i>Spodoptera albura</i> (WALKER)		○
50			* <i>Spodoptera dolichos</i> (FABRICIUS)		○
51			* <i>Spodoptera eridania</i> (STOLL)		○
52			* <i>Spodoptera exempta</i> (WALKER)	アフリカシロナヨトウ	○

Table 1. (continued)

No.	Family	Lepidoptera species	Intercepted in 1993-1996 ^a	Intercepted in 1997-2001 ^b
53		<i>Spodoptera exigua</i> (HÜBNER)	○	○
54		* <i>Spodoptera frugiperda</i> (J. E. Smith)	○	○
55		* <i>Spodoptera hipparis</i> (DRUCE)		○
56		* <i>Spodoptera latifascia</i> (WALKER)		○
57		* <i>Spodoptera littoralis</i> (BOISDUVAL)	○	○
58		<i>Spodoptera litura</i> (FABRICIUS)	○	○
59		* <i>Spodoptera ochrea</i> (HAMPSON)		○
60		* <i>Spodoptera ornithogalli</i> (GUENÉE)		○
61		* <i>Spodoptera praefica</i> (GROTE)		○
62		<i>Thysanoplusia orichalcea</i> (FABRICIUS)		○
63		<i>Tiracola aureata</i> HOLLOWAY		○
64		<i>Trichoplusia ni</i> (HÜBNER)	○	○
65		<i>Xestia c-nigrum</i> (LINNAEUS)	○	
66		* <i>Xylena exsoleta</i> (LINNAEUS)	○	
67	Nymphalidae	タテハチョウ科 <i>Cynthia cardui</i> (LINNAEUS)		○
68		* <i>Junonia atlites</i> (LINNAEUS)	○	
69	Papilionidae	アゲハチョウ科 * <i>Papilio demoleus</i> (LINNAEUS)	○	○
70	Pieridae	シロチョウ科 <i>Catopsilia pomona</i> (FABRICIUS)	○	○
71		<i>Pieris rapae</i> (LINNAEUS)	○	○
		* <i>Pieris rapae rapae</i> (LINNAEUS)		○
		<i>Pieris rapae crucivora</i> (BOISDUVAL)		○
72		* <i>Pontia daplidice</i> (LINNAEUS)		○
73	Pterophoridae	トリバガ科 * <i>Platyptilia carduidactyla</i> (RILEY)		○
74	Pyralidae	メイガ科 * <i>Amyelois transitella</i> (WALKER)		○
75		<i>Calgna defiguralis</i> WALKER	○	○
76		* <i>Chilo auricilius</i> Dodgeony	○	○
77		<i>Crocidolomia pavonana</i> (FABRICIUS)		○
78		<i>Diaphania indica</i> (SAUNDERS)		○
79		* <i>Diaphania nitidalis</i> (STOLL)	○	○
80		<i>Hellula undalis</i> (FABRICIUS)	○	○
81		* <i>Hendecasis duplifascialis</i> HAMPSON		○
82		<i>Herpetogramma basalis</i> (WALKER)	○	
83		<i>Leucinodes orbonalis</i> GUENÉE	○	○
84		<i>Maruca vitrata</i> (FABRICIUS)	○	○
85		* <i>Mussidia pectinicornella</i> (HAMPSON)	○	
86		* <i>Orphanostigma abruptalis</i> (WALKER)	○	
87		<i>Ostrinia furnacalis</i> (GUENÉE)	○	○
88		* <i>Ostrinia nubilalis</i> (HÜBNER)		○
89		<i>Parapoynx diminutalis</i> SNELLEN	○	
90		<i>Pyrausta niopealis</i> (WALKER)	○	○
91		<i>Spoladea recurvalis</i> (FABRICIUS)		○
92	Sphingidae	スズメガ科 * <i>Gurelca hyas</i> WALKER	○	
93		* <i>Macroglossum gyrans</i> WALKER	○	
94		* <i>Macroglossum prometheus</i> (BOISDUVAL)		○
95	Tortricidae	ハマキガ科 * <i>Archips micaceana</i> (WALKER)		○
96		* <i>Cacoecimorpha pronubana</i> (HÜBNER)		○
97		* <i>Clepsis spectrana</i> (TREITSCHKE)		○
98		* <i>Epiphyas postvittana</i> (WALKER)		○
99		<i>Loboschiza koenigana</i> (FABRICIUS)	○	○
100	Yponomeutidae	スガ科 <i>Plutella xylostella</i> (LINNAEUS)	○	○

* Lepidoptera species not established in Japan.

^a Based on TOKIHIRO (1998).^b Based on TAKAHASHI *et al.* (2003).

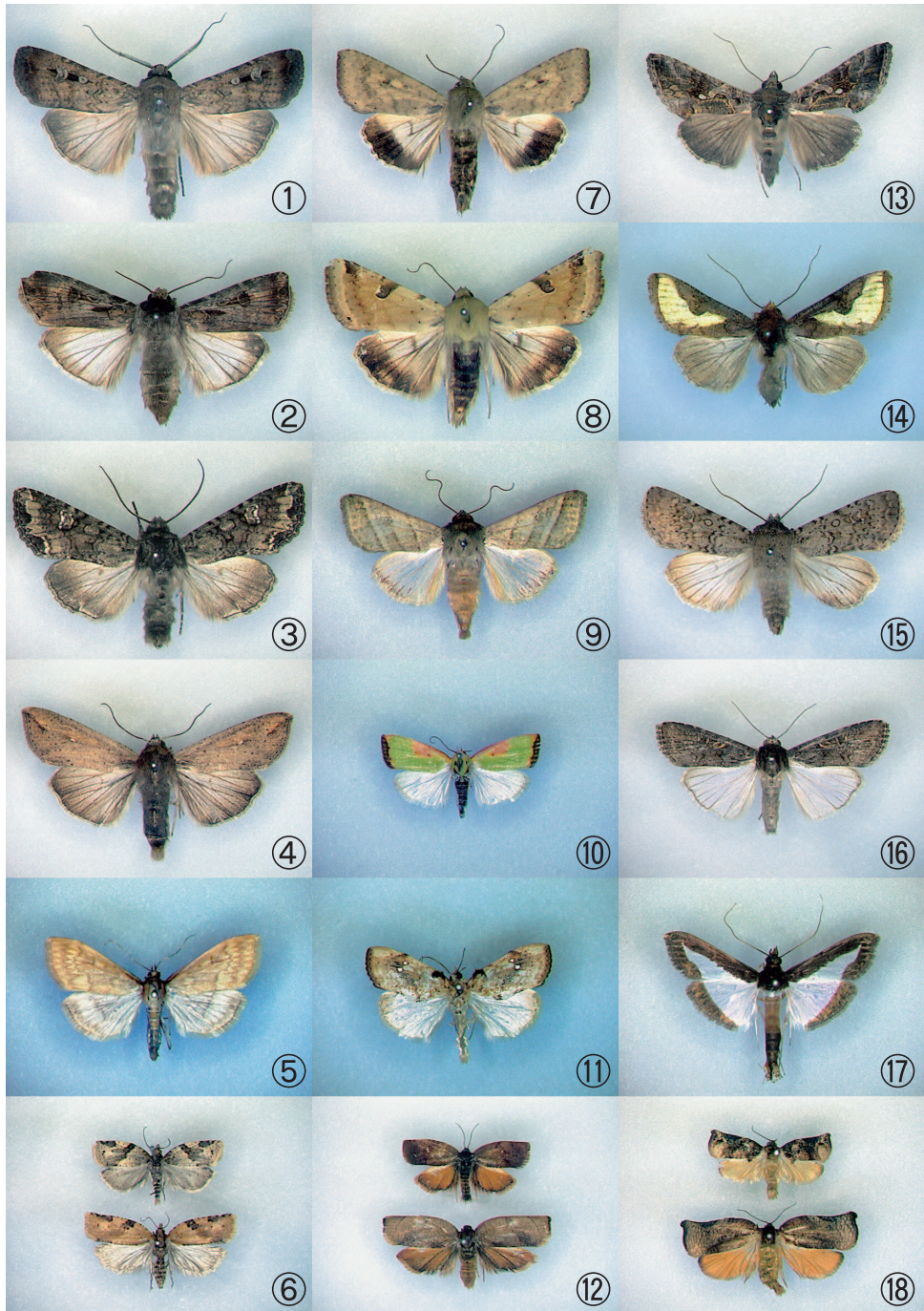


Fig. 1. Lepidoptera species intercepted at import plant quarantine of Narita Airport.

- | | | |
|-------------------------------|----------------------------------|-----------------------------------|
| ① <i>Agrotis infusa</i> | ⑦ <i>Helicoverpa punctigera</i> | ⑬ <i>Chrysodeixis includens</i> |
| ② <i>Agrotis munda</i> | ⑧ <i>Heliothis peltigera</i> | ⑭ <i>Thysanoplusia orichalcea</i> |
| ③ <i>Mamestra configurata</i> | ⑨ <i>Heliothis virescens</i> | ⑮ <i>Copitarsia turbata</i> |
| ④ <i>Mythimna unipuncta</i> | ⑩ <i>Earias cupreoviridis</i> | ⑯ <i>Spodoptera exempta</i> |
| ⑤ <i>Ostrinia nubilalis</i> | ⑪ <i>Crocidolomia pavonana</i> | ⑰ <i>Diaphania indica</i> |
| ⑥ <i>Clepsia spectrana</i> | ⑫ <i>Cacoecimorpha pronubana</i> | ⑱ <i>Archips micaceana</i> |