IMAGE EVALUATION TEST TARGET (MT-3)

Photographic
Sciences
Corporation

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

**CIHM/ICMH
Microfiche
Series.**

**CIHM/ICMH
Collection de
microfiches.**

Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

© 1982

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

☐ Coloured covers/
Couverture de couleur

☐ Covers damaged/
Couverture endommagée

☐ Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

☒ Cover title missing/
Le titre de couverture manque

☐ Coloured maps/
Cartes géographiques en couleur

☐ Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

☐ Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

☐ Bound with other material/
Relié avec d'autres documents

☐ Tight binding may cause shadows or distortion
along interior margin/
La reliure serrée peut causer de l'ombre ou de la
distortion le long de la marge intérieure

☐ Blank leaves added during restoration may
appear within the text. Whenever possible, these
have been omitted from filming/
Il se peut que certaines pages blanches ajoutées
lors d'une restauration apparaissent dans le texte,
mais, lorsque cela était possible, ces pages n'ont
pas été filmées.

☐ Additional comments:/
Commentaires supplémentaires:

☐ Coloured pages/
Pages de couleur

☒ Pages damaged/
Pages endommagées

☐ Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

☐ Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

☒ Pages detached/
Pages détachées

☐ Showthrough/
Transparence

☐ Quality of print varies/
Qualité inégale de l'impression

☐ Includes supplementary material/
Comprend du matériel supplémentaire

☐ Only edition available/
Seule édition disponible

☐ Pages wholly or partially obscured by errata
slips, tissues, etc., have been refilmed to
ensure the best possible image/
Les pages totalement ou partiellement
obscurcies par un feuillet d'errata, une pelure,
etc., ont été filmées à nouveau de façon à
obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
☐	☐	☐	☒	☐	☐
12X	16X	20X	24X	28X	32X

The copy filmed here has been reproduced thanks to the generosity of:

Library of Congress
Photoduplication Service

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol → (meaning "CONTINUED"), or the symbol ▼ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:

L'exemplaire filmé fut reproduit grâce à la générosité de:

Library of Congress
Photoduplication Service

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole → signifie "A SUIVRE", le symbole ▼ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

errata
to
e pelure,
on à

72
[From the Fifth Annual Report of the Peabody Academy of Science.]

PUBLISHED JULY, 1873.

NOTES ON NORTH AMERICAN MOTHS OF THE FAMILIES PHAL-
LENIDÆ AND PYRALIDÆ IN THE BRITISH MUSEUM. BY A.
S. PACKARD, JR.

DURING a short stay in London I was enabled to spend a few days in the British Museum and study the collection of moths named and arranged by Mr. F. Walker, forming a part of the types of the species described by him in the Catalogue of the Lepidoptera Heterocera of the British Museum. I am indebted to Dr. J. E. Gray, the keeper of the Zoological Department, to Mr. F. Smith, and also to Mr. Walker, for many courtesies and facilities extended to me. Though Messrs. Grote and Robinson* have already published some notes on these families, I present for publication these, containing references to all the species of Phalænide and Pyralide in the Museum from North America, to aid American entomologists in the thankless and well nigh impossible task of identifying our species from the too brief and insufficient or misleading descriptions contained in the museum catalogue of Heterocerous Lepidoptera, and also for my own use in my museum work.

Messrs. Grote and Robinson have fully expressed the feelings I entertain regarding the nature of these catalogues. Their publication will forever be a sad hindrance to American lepidopterists, and a warning to students to describe fully and *comparatively* their species, and from a sufficient number of specimens. A number of leading European entomologists have also expressed their opinion as to the value of these lepidopterological catalogues. In endorsing their criticisms I can but advert to the doubtfully expedient course of the officers of the museum in accepting and publishing such imperfect and unsatisfactory work. As it is, the species described in these cata-

*Notes on the North American Lepidoptera in the British Museum and described by Mr. Francis Walker. (Trans. Amer. Ent. Soc. Vol. 2, 1868-9.) Philadelphia.

logues, as may be seen below, can only be recognized by personal examination of the specimens, since so many are referred to wrong genera, or based on rubbed and imperfect specimens. When there is any doubt about the description, the safer course is to ignore it altogether. These notes refer simply to the specimens as they stand in the museum, and not to the published lists. I have not attempted here to collate them with the names in the catalogues or with the names of other authors; so that the name given here may be quite different either from the published or correct one. A mark of exclamation (!) is placed after the names of such species as seemed to me valid, so that students of the catalogue may be sure that such names represent a distinct species, and are not founded on some imperfect specimens of allied species or genera. In a few cases names believed by me to be correct are enclosed in brackets. The notes are printed just as written on the spot.

Choerodes incurvata (Florida), specimens same as *C. transmutans* from Fla! and both are the same as *C. transposita* and *C. transversata*! *C. transposita* is the dark var. with submarginal zigzag shade. *C. transversata* is the paler var. with the zigzag shade wanting, and borders of both wings subochreous.

C. transversata, one ♂ only. Is a var. of *C. transversata*.

C. conlingens, scarcely a var. of *C. transversata*.

C. translucens = ♂ *Entrepela clemataria*!

C. transiens = ♀ *E. clemataria*!

The other species of *Choerodes* are good.

In drawer 3 are 6 ♂ labelled *Entrepela clemataria* — same as the single ♂ *E. clemataria* labelled *C. translucens*.

Apicla arborea is a small *Caberodes*, and *A? agathoaria* is not congeneric with it, or congeneric with *A? rithusaria*. There is no species of *Apicla* in the collection.

Prionocla armataria!

Epione calypsoaria = *Sicya solitaria*.

Epione scribaria! There are two specimens of this species labelled *E. solitaria*.

Epione agylaria is a good species; from St. Martins' Falls.

Epione pustularia is neither *Epione* nor *Sicya*. Do not know

what it is; reminds me of *Drepanodes*, but too much rubbed for identification.

Siepi truncataria; there are no examples.

Hyperetis alienaria!

H. agassaria. One of the specimens (*b*) does not differ from *H. alienaria*. The other (*a*) is a ♀, dark, finely preserved, but conspecific, and I should unite *agassaria* with *alienaria*.

H. subsinuaria seems to be a small, dark, well marked var. of *alienaria*, but scarce anything more.

H. nephasaria!

H. irregularis is not a *Hyperetis*. Do not know what it is. No locality.

Endropia pectinaria; the 4th specimen is a *Selenia*!

E. pectinaria = *E. deductaria* Walker's type; one specimen is a rubbed *E. pectinaria* Walk.!!

E. hypochraria!

E. metusaria = *E. hypochraria*.

E. refractaria is a much rubbed *E. hypochraria*.

E. astylusaria!, a good species, closely allied to *E. pectinaria* of Walker.

E. madusaria a good species, closely allied to *E. amoenaria*.

E. oponearia does not differ from *E. madusaria*.

E. mozzaria!

E. propriaria is a rubbed *E. tigrinaria*.

E. tiliaria. A good species.

E. semiclusaria is a large *Cleora*.

Ellopiia subprivata, much rubbed = *Epione serinaria*!

E. pullaria!

E. perfidaria = *fuscellaria*, both = *E. flagitiaria*.

E. panisaria, one specimen is a true *E. pullaria*, and the other is = *Endropia lateritiaria*!

E. athanaria is nearly related to *E. seminudata*, and both are apparently good species.

Ellopiia? amygrisaria is a *Caberodes*! and too much rubbed for identification or description.

E. plagiifasciata is a *Numeria*.

E. basilaria = *E. incoloraria*, both species of *Acidalia*.

- E. deplanaria* is an *Endropia*.
E. scitata is probably the common *E. flagitiaria*.
E. ribearia = *Abraxas ribearia*.
E. megandaria is a *Caberodes*!
Caberodes imbraria!
C. remissaria!
C. superaria = *C. remissaria*! both may prove to be dark varieties of *C. floridaria* Walk.
C. phasianaria [= *C. metrocamparia*].
C. antitiscaria!
C? *agreasaria* = *Endropia lateritiaria*.
Tetracis aspilata!
T. pandaria is a large rubbed *Caberodes metrocamparia*!
Eurymene phlogosaria!
E. alceolaria!
Selenia esimaria is a large singular species of *Hyperetis*!
S. alciphearia!
Azelina neonaria is a true *Hyperetis alienaria*.
A? *zalissaria* is a true *Azelina* closely allied to *A. Hübneraria*. It is a good species.
Metanema inatommia!
Ecnomos magnaria!
E? *arsesaria* [= *Tetracis aegrotata*!]
E. subsignaria!
Caripeta angustiorata [= *Parennomos piniaria* Pack.!]
C. latiorata!
C. divisa!
Biston ursaria!
Amphidasys cognataria!
A. sperataria!
Boarmia momaria!
B. humaria! All the specimens rubbed.
B. intraria!
B. defectaria = *B. larvaria*.
B. indicataria!
B. signaria = *B. sublunaria*.
B. filaria!

- B. transfararia* is ♀ of *B. intraria*, represented by 2 ♂.
B. sublanaria!
B. albigenaria!
B. ephyraria = *B. humaria*!
B. intractaria is a rubbed *B. momaria*.
B. signataria is *Tephrosia Canadaria*!
B. pleuraria, from Mexico, is a good species.
Tephrosia Canadaria!
T. spatiosaria = *Boarmia sublanaria*.
T. abacaria!
T. intractaria is a rubbed *B. sublanaria*!
T. sublanaria!
T. disjuncta is a *Macaria*.
Tephrosia? complaria are two rubbed specimens of *Tephrosia scitularia*, which is a small *Cidaria*.
T. notaria [= *Fidonia bicoloraria* Minot!]
T. imperfectaria, of this species there is only a poor single specimen.
T. amplaria = *Bronchelia disserptaria*, both = *B. liriodendraria*.
Stenotrachelys approximaria!
Geometra inclusaria!
Jodis tractaria [= *Aplodes mimosaria* Guenée.]
Nemoria suberocata!
N. incertata. Almost too much rubbed for identification.
Dyspteris abortivaria!
Aplodes glaucaria!
Ephyra myrtaria! *E. stabilita*! *E. solitaria*!
Acidalia parata!
A. tacturata!
A. impuperata!
A. ordinata!
A. restrictata!
A. enucleata!
A. compensata!
A. timundrata!
A. quadrangulata = *Ephyra myrtaria*!

- A. restorata*!
A. ? fissinotata = *Tephrosia dispuncta* and *Macaria granitata*
 and *Larentia ? exnotata*.
A. ? sparsaria is scarcely an *Acidalia*.
Stegania pustulata!
Cabera erythemaria!
C. ? indentaria!
Corycia restaliata!
C. albata!
Macaria granitata!
M. haliata = *M. granitata*! Not even a variety!
M. undulata!
M. latiniata is a *Hyperetis* allied to *H. alienaria*.
M. equiferaria! *M. inapata*! This is not a *Macaria*.
M. transitaria!
Macaria ? submarmorata is a good species. It is a true
Macaria.
M. postrema is a rubbed *M. equiferaria*! *Macaria impro-*
priata is a *Paraphia* too much rubbed for identification.
Macaria ? indeclinata = *Endropia hypochraria*!
M. integraria is an *Aspilates*.
M. inextricata!
M. exaspicata is entirely too much rubbed and can probably
 never be identified.
M. tractata!
M. irregularata = *M. granitata*.
M. ? refusaria is too much rubbed for identification, probably
 a rubbed *M. granitata*, and I should call it a synonyme.
M. retinotata = *M. granitata*!
Halid subcessaria is very near *H. wacaria*, but ground color
 much whiter.
Tephritus expressaria! is a species of *Boarmia*.
Toxogramma defluaria.
L. extremaria!
Nemeritis occiduaris!
N. obfirmaria!
Fidonia truncataria!

- F. discospilata*!
Hemutopis grataria!
Aspilates atrapunctaria!
A. canosaria [= *Cleora pulchra* of Minot]!
Napaea arciferata!
Zerene catenaria! A *Cleora pulchra* is among the specimens placed under this name.
Anisoplectes sericeiferata [= *A. vernata* Peck].
Laurentia? fiduclata [= *Fidonia bicoloraria*].
Laurentia? plumifera!
L. cernuifascia!
L. basaliata!
L. ziczacata!
L. pluvialata = *L. ziczacata*!
L.? cornutata = *Macaria granitata*!
L.? renuclata is our common *Ypsipetes pluvialata*.
L.? cornutata!
L. castinotata [= is *Tephrosia strigularia* (Minot sp.)!]
Eupithecia implicata!
E. explanata!
Lobophora fusifasciata!
Thera? bitachata!
Ypsipetes? immersata [is *Tephrosia disconventa* *vide* Grote.]
Melanthia ruficollata!
M. gratulata!
M. gothicata!
M. reciprocata [= *Odezia albovittata* Guen.]
M. concordata!
M. lacustrata!
M. intermediata = *M. lacustrata*.
M. ideata = *M. lacustrata*.
Cocenia propugnata!
C. ferrugata!
C. abruptata is a *Campogramma*. The species good.
Campogramma geminata!
C.? abruptata, St. Martin's Falls, is a genus not known to me; it is based on a poor specimen.

Philolaptes erasiata!

P. intestinata!

P. floridata = *P. intestinata*.

Scotosia dubitata!

S. undulata!

S. lobophorata is not a *Scotosia*.

S. ineplicata is probably not a *Scotosia* and too much rubbed for identification. The specific name is exceedingly appropriate.

Cidaria ruscata!

C. remotata!

C. gibbivostata [= *Teplirina strigularia* (Minot)].

C. diversilinata!

C. propulsata!

C. molliculata may prove to be a var. of *C. remotata*.

C. emigrata!

C. inclinataria seems to be a true *Correnia*!

C. rigulata!

C. cephalata; one broken and rubbed specimen.

C. albifusata!

C. frigidata is an *Ypsipetes*!

Pelenia similis is closely allied to *Cidaria propulsata*.

Anatlis orillata!

Heterophleps atrosignata is *Halio succursaria*.

PYRALIDÆ.

Hyppena Baltimoralis!

H. rufinalis is a *Crambus*.

H. damnosalis!

H. scabralis!

H. benignalis is a variety of *H. Baltimoralis*.

H. bijugalis is a variety of *H. Baltimoralis*.

H. edictalis!

H. generalis!

H. deceptalis!

H. manualis!

H. idreusalis is not a Pyralid; perhaps a Tineid.

H. eubucalis!

H. germinalis is near, if not the same as *H. humuli* Harris.

H. caecalis! Is it a Hypena?

H. edutalis!

H. schriatalis is not a Hypena.

H. cacamialis. Too much rubbed for description.

H. fractiosalis. A good species, but is it a Hypena?

H. fulvialis!

H. habitalis!

Doripodes acutalis [not *D. acutalis* Guen.] is a genus allied remotely to Hypena.

Hormisa absorptalis!

Ricula propinqualis!

Herminea morbitalis!

H. pedipitalis!

H. curralis!

H. jacehusalis!

H. theralis! Too much rubbed for identification.

H. gyasalis = *H. pyramusalis*.

H. pyramusalis = *H. gyasalis*.

H. protumnusalis!

H. eumelusalis!

H. metonalis! Specimens in bad condition.

H. bifurcalis! Specimen in bad condition.

H. cloniusalis!

H. phalerosalis!

H. salusalis!

H. heliusalis!

H. elitusalis!

Bleptina surrectalis is the common large Aglossa.

B. mynesalis!

Epizeuxis goosalis is not a Helia.

E. lituralis!

Palthis angulalis!

Pyralis farinalis!

P. hyllalis!

Aglossa cuprealis!

Eumyphla glomeralis!

Desmia funeralis!

D? janassialis!

Adiodes minimalis!

Samea ebulealis!

S. ecalis!

S. phyllisalis!

Asopia archiasialis!

Agathodes monstralis!

Parapompe allionealis!

Hydrocampa itealis! Not a true *Hydrocampa*; wings much longer.

Zebonia serinalis, but with longer wings than usual in the genus.

Leucochroma icciusalis!

Phacellura nitidalis!

Ph. hyalinatalis!

Ph. immaculalis!

Botys arypalis is *B. ventralis* G. & R. their label annexed.

B. verticalis!

B. apertalis!

B. strictalis!

B. theseusalis!

B. siriusalis!

B. licalis!

B. olliusalis!

Isopteryx? oblitalis! The species is a good one.

? leucothoalis! The species is a good one.

Oligostigma seminealis!

O. curviferalis!

Catylcysta lamialis!

C. claudialis!

C. principalis!

C. confusalis!

Botys oblitalis and *B? pantheralis* are considered as synonyms by Walker, one specimen representing both labels. Specimens too much rubbed for identification.

B. thysalis = *B. apertalis* and *B. oxydalis*. Placed together by Walker.

B. missippusalis = *B. periusalis*.

B. periusalis = *B. missippusalis*.

B. arsaltealis!

B. thymelusalis!

B. oglealis!

B. illutalis!

Pionea emousalis!

P. sculpturalis [= *Pantographa lineata* G. & R.]

P. hebralis, too much rubbed for description.

P. diomedis! " " "

Spilodes nisecealis, too much rubbed for identification.

Scopula rubigalis, *S. orasulalis*, *S. nestoralis*, *S. commistalis*.

Meeyna reversalis. All founded on poor, unrecognizable specimens.

Stenopteryx hybridalis!