

ADDITIONAL RECORDS AND REVISED LIST OF INSECTS ASSOCIATED WITH
STORED PRODUCTS IN ISRAEL

by

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ABSTRACT

Fifteen species of Coleoptera not previously recorded as stored products pests in Israel are mentioned. Four Hymenopteran parasites and one Hemipteran predator were listed and recently recorded hosts of two common stored product pests were provided. An up to date list of 84 insects recorded on stored products in Israel is given.

Introduction

In a previous paper on the stored products insects of Israel (M. Calderon & E. Donahaye 1964) (2), 65 insect species belonging to the orders Lepidoptera & Coleoptera were listed. Since then a number of new species have been recorded some of which we believe to be new records for Israel, and others recorded for the first time in Israel on stored products. Also included in this paper is a short list of Hymenoptera and Hemiptera associated with stored product insects. Lastly a number of misnomers in the previous paper are corrected.

Order Lepidoptera

Family Phycitidae

Arenipses sabella Hampson. Reared from larvae feeding on stored dates (Deglet Noor) Yotvata 1968. Det: E. Donahaye.

Order Coleoptera

Family Anthicidae

Anthicus floralis (L.) (1) On local wheat Tel Aviv 1967. On Mouldy wheat damaged by floods, Haifa Bay 1969. Det: E. Donahaye.

Anthicus debilis Laf. (1) On stored cotton seed, Ofakim 1967. Det: B. J. Southgate.

Family Anthribiidae

Araecerus fasciculatus (de G.) On flower bulbs from Ghana 1965. Det: B. J. Southgate. Also recorded on Avocado fruit 1966 (Y. Tych) and on dry loquats 1967 (S. Navarro). A specimen in the collection of the Department of Plant Protection bears the label - intercepted at Customs, Jerusalem, 12. XI. 32. on seeds from Panama.

Family Bruchidae

Pachymeroides bridwelli Prevelt (3) Recorded on seeds of *Butia capitata* imported from Uruguay 25.2.57 1 ♀ paratype presented to British Museum) Det: P. F. Prevelt.

Family Curculionidae

Caulophilus oryzae (Gillenhal) Syn: C. latinasus (Say). Found infesting Avocado fruit in the grove by Y. Tych 1966. Det: W. Ebeling. Although not recorded in storage in Israel this insect is a pest of stored grain in the southern states of the U. S. A. and also attacks grain, acorns and avocado seed in the field.

Family Dermestidae

Attagenus alfierii Pic. In separator of grain silo Geva 1968. Det: E. Donahaye (The specimens previously recorded as A. piceus (2) from Tel Aviv 1962 and Heftsibah 1962 (Collection, Stored Products Laboratory) have since been re examined and found to be A. alfierii).

Trogoderma inclusum Le Conte. Previously noted as a synonym of T. versicolor (Greutz) (2) these are now considered to be two distinct species. The Israeli specimens have been examined and identified as T. inclusum. Det: R. S. Beal.

Family Histeridae

Carcinops quattuordecimstriata Stephens. On rotting wheat Petah Tiqva 1966, Rotting Wheat, Haifa bay 1969. Det: E. Donahaye.

Family Lathridiidae

Holoparamecus singularis (Beck)? On mouldy cotton seed in storage. Yiphat 1969. Identification not confirmed.

Family Nitidulidae

Nitidula carnaria (Schaller) (1) On stored almonds Zrifin 1968. Det: R. Madge.

Carpophilus pilosellus Motsch. On moist sorghum grain in sweepings. Shouval 1963. Det: A. D. Aitken, R. M. Dobson.

Carpophilus sp. probably mutilatus Er. (genitalia not dissected). On local wheat in bin, Netania 1963. Det: A. D. Aitken, Collected Stored Products Laboratory.

Family Ptinidae

Gibbium psyllioides Czemp. On local stored wheat. Haifa bay, 1967. Det: E. Donahaye.

Family Tenebrionidae

Palorus subdepressus Woll. (1) On stored cotton seed Ofakim and Kiryat Gat 1967-1968. On local wheat Maabuim 1968, Haifa bay 1969. This species was re-

corded by Y. Palmoni in 1942 as occurring on rotting wood and in the bedding of poultry houses (personal communication).

Palorus ratzeburgi (Wissman) On peas stored in sacks. Jafo 1968.

Order Hymenoptera

Family Ichneumonidae

Nemeritis canescens Grav. (1). Listed, Bodenheimer, as parasitizing Ephestia.

Habrobracon hebeter Say. In flour containing larvae of Ephestia kühniella. Det: Dr. Fisher.

Family Pteromalidae

Dinarmus laticeps Ash. On Callosobruchus maculatus (F.) larvae infesting lentils imported from Ethiopia 1965, Det: V. Delucchi.

Chaetospila elegans Wastw. On Sitophilus oryzae larvae on wheat Common. Det: Z. Boucek.

Lariophagus distinguendus Forst. (1). On Sitophilus oryzae larvae on wheat. Common. Det: Z. Boucek. Also in Collection of Department of Plant Protection from extraneous material infested with Calandra sp. Miqve Israel 5 XII 39.

Order Hemiptera

Family Anthocoridae

Xylocoris flavipes Reut. On local wheat in store. Netivot 1967. Det: G. E. Woodroffe.

New host records for previously recorded insect species.

Ectomyelois ceratoniae (Zell) Previously recorded (2) as a pest of stored carobs. Now known to be the chief pest of stored almonds, especially paper-shell varieties.

Carophilus dimidiatus (F) Recorded in large numbers on stored cotton seed Kiryat Gat, 1967, and also on stored almonds Zrifin 1968. Det: R. M. Dobson.

REVISED LIST OF INSECTS RECORDED IN ISRAEL AS ASSOCIATED WITH STORED PRODUCTS:

(Families arranged in alphabetic order).

Order Lepidoptera

Family Gelechiidae

1. Sitotrogra cerealella (Oliv.)

Family Pyralidae

2. Pyralis farinalis (L.)

Family Phycitidae

3. Ephestia kühniella (Zell.)
4. Ephestia calidella (Guenée)
5. Ephestia cautella (Walk.)
6. Ephestia figulilella (Gregs.)
7. Ectomyelois ceratoniae (Zell.)
8. Arenipsea sabella Hampson
9. Plodia interpunctella (Hbn.)

Family Tinaeidae

10. Niditinaea fuscipunctella (How.)
11. Tinaea pellionella L.

Order Coleoptera

Family Anobiidae

12. Anobium punctatum (De Geer)
13. Lasioderma serricorne (F.)
14. Stegobium paniceum (L.)

Family Anthicidae

15. Anthicus floralis (L.)
16. Anthicus debilis Laf.

Family Anthribidae

17. Araecerus fasciculatus (De Geer)

Family Bostrychidae

18. Rhizopertha dominica (F.)
19. Prostephanus truncatus (Horn)
20. Dinoderus minutus (F.)

Family Bruchidae

21. Acanthoscelides obtectus (Say)
22. Callosobruchus maculatus (F.)
23. Callosobruchus chinensis (L.)
24. Pachymeroides bridwelli Prevelt
25. Zabrotes subfasciatus (Boh.)
26. Caryedon serratus (F.)

Family Carabidae

27. Somotrichus unifasciatus Dej.

Family Cleridae

28. Necrobia rufipes (De Geer)
29. Thanoclerus buqueti Lef.

Family Cucujidae

30. Cryptolestes ferrugineus (Steph.)
31. Cryptolestes pusillus (Oliv.)

Family Curculionidae

32. Sitophilus granarius (L.)
33. Sitophilus oryzae (L.)
34. Sitophilus zea mais Motsch.
35. Caulophilus oryzae (Gillenhal)

Family Dermestidae

36. Anthrenus pimpinellae (F.)
37. Anthrenus scrophulariae (L.)
38. Anthrenus verbasci (L.)
39. Anthrenus vorax Waterh
40. Attagenus gloriosae (F.)
41. Attagenus alfieri Pic
42. Dermestes ater De Geer
43. Dermestes frischii Klug
44. Dermestes maculatus De Geer
45. Trogoderma granarium Everts
46. Trogoderma inclusum Le Conte

Family Histeridae

47. Carcinops quattuordecimstriata Stephens

Family Lathridiidae

48. Enicmus minutus L.
49. Holoparamecus singularis (Beck)?

Family Mycetophagidae

50. Typhaea stercorea L.

Family Nitidulidae

51. Nitidula carnaria (Schaller)
52. Carpophilus hemipterus (L.)
53. Carpophilus dimidiatus (F.)
54. Carpophilus humeralis (F.)
55. Carpophilus pilosellus Motsch.
56. Carpophilus mutilatus Er. ?
57. Carpophilus obsoletus Er.

Family Ostomatidae

58. Tenebroides mauritanicus (L.)

Family Ptinidae

59. Ptinus fur (L.)
60. Gibbium psyllioides Czemp.

Family Scolytidae

61. Coccotrypes dactyliperda (F.)

Family Silvanidae

62. Ahasverus advena (Watl.)
63. Carthatus quadricollis Guér.
64. Oryzaeophilus mercator (Fauv.)
65. Oryzaeophilus surinamensis (L.)

Family Tenebrionidae

66. Alphitobius diaperinus (Panz.)
67. Alphitobius laevigatus (F.)
68. Alphitophagus bifasciatus (Say)
69. Gnathocerus cornutus (F.)
70. Latheticus oryzae Waterh.
71. Palorus subdepressus Woll.
72. Palorus ratzeburgi (Wissman)
73. Tenebrio molitor L.
74. Tenebrio obscurus F.
75. Mesomorpha longulus Reiche
76. Tribolium castaneum (Herbst)

77. Tribolium confusum J. du Val
78. Tribolium destructor Uyttenb.

Order Hymenoptera

Family Ichneumonidae

79. Nemeritis canescens Grav.

Family Braconidae

80. Habrobracon hebetor Say.

Family Pteromalidae

81. Dinarmus laticeps Ash.
82. Chaetospila elegans Westw.
83. Lariophagus distinguendus Forst.

Order Hemiptera

Family Anthocoridae

84. Xylocoris flavipes Reut.

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