

AN ANNOTATED KEY AND ILLUSTRATIONS TO THE
SPECIES OF THE GENUS *CUCULLIA*
(LEPIDOPTERA: NOCTUIDAE: CUCULLIINAE) FROM
MEXICO AND CENTRAL AMERICA

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Abstract.—A key to the Mexican and Central American species of the genus *Cucullia* is presented. The key is annotated with the geographical distribution of each species and supplemented with illustrations of the adults of each species.

Jack Franclemont, among his many and diverse interests, has always had a special affection for the species of the genus *Cucullia* Schrank. The species in *Cucullia* have a characteristic long, pointed forewing and the patagia are raised into a pointed hood. Although these two features are not unique to *Cucullia*, the species of the genus are usually easily recognizable. The genus is primarily Holarctic with the bulk of its diversity in Europe, North America, and Asia. Species are relatively less well represented in Africa. The genus is strongly developed in Canada and the United States, but much more poorly represented south of the U.S.-Mexican border. The southernmost known extension of the genus is in Costa Rica. Only a single species occurs in Mexico and Central America that is not found in the United States, *Cucullia costaricensis* Hampson. I have recently completed a revision of the genus *Cucullia* which will soon appear as part of a fascicle in the *Moths of America North of Mexico* series (Poole, 1992). The purpose of this paper is to complete the treatment of the New World species of the genus by presenting an annotated key and illustrations to the species known or strongly suspected to occur in Mexico and Central America. This paper is meant to supplement the *Moths of America North of Mexico* fascicle. Color illustrations of all of the species (except *costaricensis*) along with full discussions and descriptions of the species, and photographs of the male and female genitalia may be found there. References to original descriptions and dates of publication may also be found in that publication or alternatively may be retrieved from Poole (1989).

Many of the species treated are U.S. species which have not yet been collected south of the border but probably occur in northern Mexico. I have not included those species that are part of the Mohave Desert region fauna of southern California that also occur in northern Baja California. The reader will want to refer to the *Moths of America North of Mexico* fascicle for the identification of species of *Cucullia* from this region of Mexico.

The following is a list of the species treated in this paper arranged by species groups following the arrangement in the *Moths of America North of Mexico* fascicle.

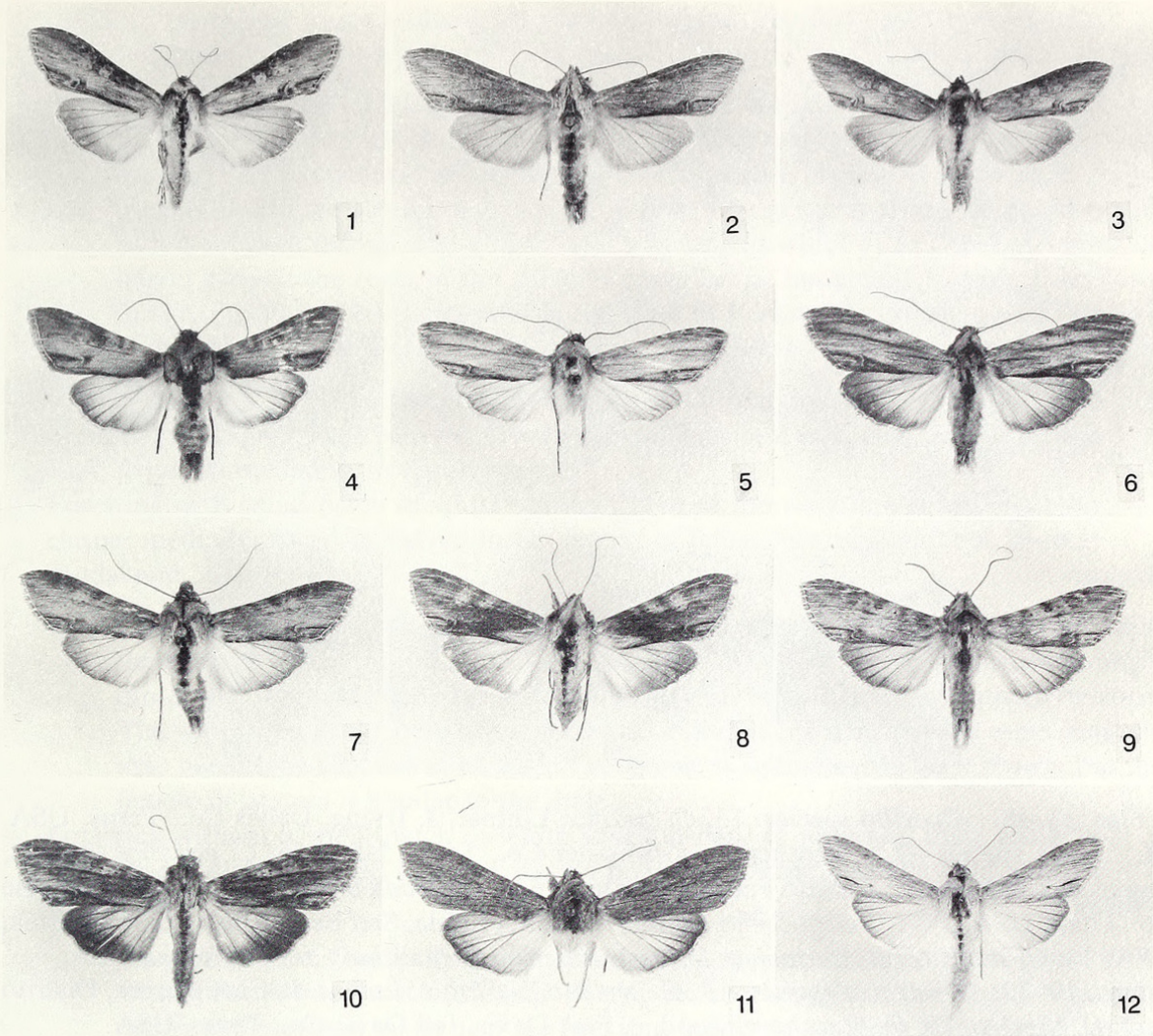
asteris species group

Cucullia montanae Grote

- Cucullia postera* Guenée
- Cucullia obscurior* Smith
- convexipennis species group
 - Cucullia lilacina* Schaus
 - Cucullia eucaena* Dyar
 - Cucullia costaricensis* Hampson
 - Cucullia oribac* Barnes
- speyeri species group
 - Cucullia* new species #1
 - Cucullia laetifica* Lintner
 - Cucullia* new species #2
 - Cucullia* new species #3
 - Cucullia eccissica* Dyar
- antipoda species group
 - Cucullia antipoda* Strecker
- strigata species group
 - Cucullia serraticornis* Lintner

KEY TO THE SPECIES OF CUCULLIA

- 1. Fore tibia with a distinct claw; front of head with large, triangular frontal process *antipoda*
 - Cucullia antipoda* Strecker (Fig. 16) has not been seen from Mexico, but is abundant in the drier areas of the western United States and has been collected in southern New Mexico and Arizona. It probably will be found in Chihuahua and Sonora.
- Fore tibia without a distinct claw; front of head without frontal process 2
- 2. Palpi studded with thin brown hairs giving palpi a bristly look; each antennal segment of male ventrally expanded into a laterally projecting plate of variable development, each plate with distinct hairs; early spring fliers *serraticornis*
 - Cucullia serraticornis* Lintner (Figs. 17, 18) has not yet been collected in Mexico. It occurs commonly in southern California and in southeastern Arizona. It undoubtedly will be found in Sonora as well.
- Palpi not studded with thin brown hairs, not appearing bristly; antennal segments of male simple 3
- 3. Lower third of postmedial line of forewing a conspicuous light line edged with black on both sides; orbicular and reniform usually obviously present; forewing not gray, but if gray usually with a distinct violet or blue tint 4
 - Lower third of postmedial line of forewing not conspicuous although often vaguely present; orbicular and reniform usually obscure or absent; forewing some shade of gray with or without a bluish tint, never purplish 11
- 4. A dark lateral streak through the middle of the forewing along the cubital vein 5
 - No dark lateral streak through the middle of the forewing along the cubital vein 6
- 5. Larger species (forewing length from base to apex approximately 25 mm)
 - *costaricensis* (♀)
- Smaller species (forewing length from base to apex approximately 20 mm) *oribac*
 - Cucullia oribac* Barnes (Figs. 5, 6) has been seen from Veracruz, Morelos, Chiapas, and the Federal District in Mexico. Its northern limit is southern and central Arizona

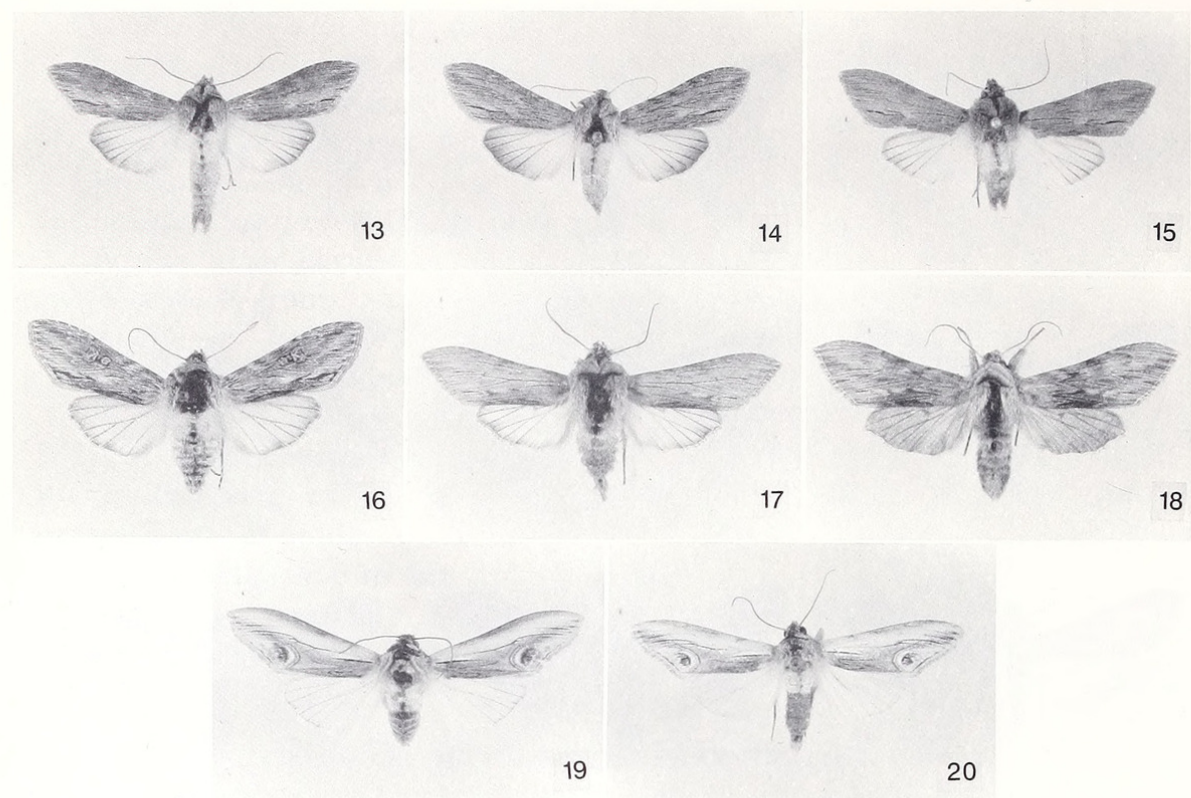


Figs. 1–12. *Cucullia* species. 1. *C. montanae* Grote, ♂, Portal, Cochise Co., Arizona, USA. 2. *C. obscurior* Smith, ♂, Alta Lakes, San Miguel Co., Colorado, USA. 3. *C. postera* Guenée, ♂, Hill City, Pennington Co., South Dakota, USA. 4. *C. lilacina* Schaus, ♂, Lomas de Chapultepec, Distrito Federal, Mexico. 5. *C. oribac* Barnes, ♂, Zacualpan, Mexico, Mexico. 6. *C. oribac* Barnes, ♀, Ciudad de Mexico, Distrito Federal, Mexico. 7. *C. eucaena* Dyar, ♂, Mount Locke, Jeff Davis Co., Texas, USA. 8. *C. eucaena* Dyar, ♀, Lomas de Chapultepec, Distrito Federal, Mexico. 9. *C. costaricensis* Hampson, ♂, Mount Poas, Alajuela, Costa Rica. 10. *C. costaricensis* Hampson, ♀, Orizaba, Veracruz, Mexico. 11. *C. new species* #2, ♂, Lomas de Chapultepec, Distrito Federal, Mexico. 12. *C. new species* #1, ♂, Hondo, Medina Co., Texas, USA.

to western New Mexico. It probably occurs generally in Mexico, possibly extending further south into Guatemala.

- 6. Forewing lilac or violet with a distinct fawn-brown patch between the reniform and outer margin *lilacina*

The violet forewing color of *Cucullia lilacina* Schaus (Fig. 4) is very distinctive. The species has been collected in Veracruz and the Federal District in Mexico and the state of Cartago in Costa Rica. The northern limit of its range is in Arizona, New Mexico, and western Texas.



Figs. 13–18. *Cucullia* species. 13. *C. laetifica* Lintner, ♂, Irving, Dallas Co., Texas, USA. 14. *C. new species* #3, ♀, Panther Pass, Brewster Co., Texas, USA. 15. *C. eccissica* Dyar, ♂, Lomas de Chepultepec, Distrito Federal, Mexico. 16. *C. antipoda* Strecker, ♂, Ephraim, Sanpete Co., Utah, USA. 17. *C. serraticornis* Lintner, ♂, Loma Linda, San Bernardino Co., California, USA. 18. *C. serraticornis* Lintner, ♀, Loma Linda, San Bernardino Co., California, USA. Figs. 19–20. *Opsigalea* species. 19. *O. ocellata* Walker, ♂, Lomas de Chepultepec, Distrito Federal, Mexico. 20. *O. blanchardi* Todd, ♂, Fort Davis, Jeff Davis Co., Texas, USA.

- Forewing not as above 7
- 7. Hindwing pure white or with a white base and dark brown outer margin 8
- Hindwing dull brown and if base lighter than outer margin, not conspicuously so *obscurior*
- Cucullia obscurior* Smith (Fig. 2) has not yet been collected in Mexico, but it has been collected in extreme southern Arizona and probably occurs in northern Sonora as well.
- 8. Basal area of forewing with a large area of light brown; hindwing of male with broad band of dark brown; median and middle subterminal area of forewing contrastingly lighter than rest of wing *montanae*
- Cucullia montanae* Grote (Fig. 1) has not yet been collected in Mexico, but has been seen from southern Arizona, New Mexico, and western Texas. It probably occurs in northern Sonora and Chihuahua.
- Basal area of forewing without large patches of light brown; hindwing of male (but not of female) without broad band of dark brown; median and middle subterminal area of forewing not significantly lighter than remainder of forewing 9
- 9. Forewing with postmedial line distinct near costal margin; median area of male not

uniform violet-gray; male without rusty patch between reniform and apex; female with dark streak on median vein of forewing *costaricensis* (♀ and ♂)

Cucullia costaricensis Hampson (Figs. 9, 10) is the largest and most southerly species of the genus in the New World. The only species *costaricensis* might be confused with is *eucaena*. Its larger size and superficial differences are illustrated in the plate. In the male genitalia the smaller spine of the vesica is very short, about as long as wide, but in *eucaena* the spine is at least twice as long as wide. The clasper of the valve barely exceeds the costa of the valve in *costaricensis* but greatly surpasses the costa in *eucaena*. It has been collected in the state of Veracruz in Mexico, Baja Verapaz and Quezaltenango in Guatemala, and San Jose, Cartago, and Alajuela in Costa Rica.

- Forewing with postmedial line indistinct near costal margin; median area of male uniform purple-gray; male with rusty patch between reniform and apex; female without dark streak on median vein of forewing 10
- 10. Forewing with small patch of white scales at base of forewing; male genitalia with clasper medially placed in valve; ductus bursae of female genitalia without knob at caudal end *eucaena*

Cucullia eucaena Dyar (Figs. 7, 8) is known from Puebla, Veracruz, Guerrero, and the Federal District in Mexico. As in *costaricensis* and *oribac* the sexes are strongly dimorphic. The male of *eucaena* is almost identical to *postera* from southern Arizona. The white spot at the base of the forewing should identify it, but the male genitalia may need to be checked to be sure. The female is suffused with dark brown, but the female of *postera* is similar to the male.

- Forewing without a small patch of white scales at base of forewing; male genitalia with clasper distally placed in valve; ductus bursae of female genitalia with knob at caudal end *postera*

Cucullia postera Guenée (Fig. 3) is primarily a species of the northern parts of the United States and most of Canada. It also occurs throughout the Rocky Mountain region and has been taken near the Mexican border in southern New Mexico. It has not yet been collected in Mexico, but probably will be. The male is almost identical to the male of *eucaena* except for the small white patch mentioned in the key. For certainty the male genitalia must be checked. Females resemble the males unlike the female of *eucaena*.

- 11. Forewing very light gray with central median area almost white; black dash on lower fourth of postmedial line contrasting with light coloration of median area new species #1

Cucullia new species #1 (Fig. 12) has not yet been collected in Mexico, but occurs throughout eastern and central Texas south to Brownsville and is commonest along the coast. It probably occurs in Tamaulipas and possibly Nuevo Leon as well. The light gray tinted with white coloration of the forewing will separate it from *laetifica*.

- Forewing not as above 12
- 11. Forewing uniform dark black-gray; claspers of right and left valves of male genitalia equal in size; vesica of aedoeagus with two spines new species #2

Cucullia new species #2 (Fig. 11) is the largest and darkest species of the *speyeri* species group. It has been collected in the Federal District of Mexico. Elsewhere it is known only from southeastern Arizona. Its largest size and dark coloration will distinguish it from the other species in the *speyeri* species group.

- Not as above 13

13. Forewing with a light patch in the median area; forewing with a slightly metallic blue tint *laetifica*
Cucullia laetifica Lintner (Fig. 13) has not yet been collected in Mexico. The species is common in southern Arizona, New Mexico, and Texas and undoubtedly occurs throughout northern Mexico as well.
- Forewing without a light patch in the median area; forewing uniformly light gray without a metallic blue tint 14
13. Vesica of male genitalia with two spines *eccissica*
Cucullia eccissica Dyar (Fig. 15) has been collected in the states of Puebla and Mexico in Mexico. In the United States it occurs in southern California and southern Arizona.
- Vesica of male genitalia with three spines new species #3
Cucullia new species #3 (Fig. 14) has not been collected in Mexico as yet, but occurs in western Texas and southern Arizona and probably occurs in Coahuila, Chihuahua and Sonora as well. Its smaller size and the three spines in the vesica will distinguish it from *eccissica*.

In addition to the species of *Cucullia* keyed above, there are two species of the genus *Opsigalea* Hampson occurring in Mexico that may be mistaken for species of *Cucullia*. These two species are *Opsigalea ocellata* (Walker) (Fig. 19) and *Opsigalea blanchardi* Todd (Fig. 20).

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