

**NEW SPECIES OF PSEUDOPHISUS FROM
NORTH AMERICA, II
(Hymenoptera: Sphecidae)¹**

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ABSTRACT

The 27 species of North American *Pseudophisus* Ashmead are arranged in six species groups for which characteristics and a key are given. Twelve new species are described, *P. butleri*, *californicus*, *catalinae*, *claripennis*, *erugatus*, *flavidulus*, *hadrus*, *imperialis*, *ocellatus*, *nigricomus*, *samiatus* and *tanythrix*. These are from western and southwestern United States and Mexico.

In a previous paper, the species of the *Pseudophisus phaleratus* group were treated (1969. J. Kansas Entomol. Soc. 41:494-501). Twelve new species are described below. These belong to five other species groups, which are indicated in the accompanying key. Holotypes of the new species are located as follows: *P. imperialis* in the U. S. National Museum (USNM); *hadrus* in the Snow Museum of the University of Kansas (KU); *erugatus* and *tanythrix* in the California Academy of Sciences (CAS); and *butleri*, *californicus*, *catalinae*, *claripennis*, *flavidulus*, *ocellatus*, *nigricomus* and *samiatus* in the University of California at Davis (UCD).

The six groups of *Pseudophisus* appear to form an evolutionary sequence illustrating a progressive reduction of pits along the metapleural suture, the lateral propodeal sulci, and the transverse sulcus on the scutellum. The corresponding *Pseudophisus* are respectively the *fasciatus*, *venustus*, *smithii*, *montanus*, *abdominalis* and *phaleratus* groups.

Key to *Pseudophisus*

1. Metapleural suture simple or seamlike above upper fossa 2
 Metapleural suture distinctly pitted above upper fossa 10
2. Lateral sulci of propodeal enclosure plainly pitted as well as
 anterior transverse sulcus of scutellum (*P. montanus* group) .. 3
 Lateral sulci of propodeal enclosure simple or seamlike 5
3. Sternite II with distinct punctures fully as large as those on
 frons; female pygidium unusually large, sides curved out and
 diverging at 70 degrees, punctures large and sparse; color
 pattern black, yellow, and red *catalinae* R. Bohart
 Sternite II impunctate or with punctures smaller than those of
 frons; female pygidium striatopunctate, sides diverging at 40
 to 45 degrees 4
4. Lower metapleural fossa considerably larger than adjacent

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- mesopleural fossa; propodeal hair mostly as long as midocellus or shorter; color pattern black, yellow, and red *samiatus* R. Bohart
- Lower metapleural fossa about as large as adjacent mesopleural fossa; propodeal hair mostly twice as long as midocellus or longer; color pattern essentially black and yellow *montanus* (Cameron)
5. Scutellum with anterior transverse sulcus simple; hindclaws sometimes opposed by an inner basal lobe *P. phaleratus* group
- Scutellum with anterior transverse sulcus plainly pitted; hindclaws simple (*P. abdominalis* group) 6
6. Tergite III distinctly punctate medially 7
- Tergite III practically impunctate medially 8
7. Median cell of forewing stained with reddish brown *hadrus* R. Bohart
- Median cell of forewing essentially clear *claripennis* R. Bohart
8. Mostly black, marked with pale yellow; hindtarsi dark *aequalis* (Handlirsch)
- Mostly red and yellow; hindtarsi yellow or pale reddish 9
9. Sternite II polished, a few scattered and indistinct micropunctures; erect hair of propodeal "cheeks" longer than midocellus *abdominalis* (Cresson)
- Sternite II plainly punctate; erect hair of propodeal "cheeks" shorter than midocellus *erugatus* R. Bohart
10. Forewing with a moderately convex basal costal lobe; hindclaws simple (*P. fasciatus* group) 11
- Forewing with a strongly bulging basal costal lobe 16
11. Tergites II to IV with narrow apical bands of short, stiff, upright, reddish bristles; body black and yellow, legs mostly reddish and yellow *fasciatus* (W. Fox)
- Tergites II to IV without conspicuous bands of upright bristles 12
12. Hindtarsi brown in posterior view; flagellum darkened in front, at least toward apex 13
- Hindtarsi with at least basal four articles light red or yellow in posterior view; flagellum pale in front to apex 14
13. Thorax mostly black and yellow *californicus* R. Bohart
- Thorax mostly red and yellow *flavidulus* R. Bohart
14. Body mostly yellow, marked with red; tergite II with distinct, scattered punctures medially *imperialis* R. Bohart
- Body mostly black and yellow 15
15. Tergite I with two small yellow spots toward base, propodeum with large yellow spots; clypeus with moderately coarse and extensive punctation; female pygidium sparsely punctate and angled at about 45 degrees *ocellatus* R. Bohart
- Tergite I not yellow spotted toward base, propodeum with large

- red spots; clypeus with mostly fine punctation, coarser medially; female pygidium rather closely punctate and angled at about 37 degrees *rufomaculatus* (W. Fox)
16. Hindclaw not opposed by a lobular extension from inner base (*P. venustus* group) 17
 Hindclaw opposed by a lobular extension from inner base (*P. smithii* group) 19
17. Scrobal sulcus and its continuation forward to omaulus weakly indicated; subantennal triangle in male nearly twice as high as broad; tergites II and III rather coarsely punctate *butleri* R. Bohart
 Scrobal sulcus and its continuation forward to omaulus deeply indented; subantennal triangle in male not or hardly as high as broad 18
18. Metapleural suture coarsely pitted for its whole length; outer posterior line of bristles on midtibia stout and prominent *divisus* (F. Smith)
 Metapleural suture simple below upper fossa; outer posterior line of bristles on midtibia slender and inconspicuous *venustus* (Cresson)
19. Lower mesopleural and metapleural fossae divided; tergite II with distinct scattered macropunctures as large as those on frons, or nearly so; hair on propodeum less than 1.5 times as long as midocellus *rubiginosus* (Handlirsch)
 Lower mesopleural and metapleural fossae confluent; tergite II with a few faint micropunctures at most; hair on propodeum 2 to 4 times as long as midocellus 20
20. Tergite IV with a scattering of punctures nearly as coarse as interocellar ones; wings nearly black *smithii* (Cresson)
 Tergite IV with a few micropunctures only 21
21. Wings mostly amber; propodeal hair amber; lateral ocellus in male about 1.3 times its diameter from compound eye; male antenna pale in front for whole length *tanythrix* R. Bohart
 Wings dark brown; propodeal hair dark reddish brown; lateral ocellus in male more than twice its diameter from compound eye; male antenna dark in front toward apex *nigricornus* R. Bohart

The *Pseudoplisus montanus* Group

The *montanus* group, which includes *catalinae*, *montanus* (Cameron), and *samiatus*, has the following diagnostic characters: a strongly bulging costal lobe near base of forewing, metapleural suture not pitted above upper fossa but sulcus toward front of scutellum and sulci bounding propodeal enclosure pitted, hindclaws simple. Other characteristics are: subantennal triangle higher than broad (except in *samiatus*), wings extensively brown (least so in *montanus*), omaulus

continuous with sternaulus and extending from pronotal lobe to lower mesopleural fossa, scrobal sulcus continued forward to omaulus by a sharp or a weak groove, lower mesopleural fossa divided by a septum from lower metapleural fossa, tergites III and IV with punctation very fine or absent in midline, female pygidium punctate to striate.

***Pseudoplisus catalinae* R. Bohart, new species**

MALE (holotype). Length 10 mm. Black, yellow, and red. Yellow: mandible basally, clypeus, orbital lines on lower frons, scape and pedicel in front, pronotal ridge and lobe as well as nearby mesopleural dot, lateral scutal dot, broad band on scutellum, spots on propodeal "cheeks," legs partly, including outer surfaces of tibiae, forefemur and foretarsus, distal dot on midfemur, broad apical tergal bands covering all normally exposed surface of III to VI, sternites I to III mostly, IV laterally; orange-red: basal six flagellomeres, two spots on mesopleuron, large spots on propodeal "cheeks," legs partly, including all of hindfemur and most of hindtarsus, tergites I and II subbasally (black at base), sternites V and VI. Pubescence pale, spots on propodeum and velvety on notum, inconspicuous on pleuron, 1.0 to 2.0 ocellus diameters long on propodeum, forming soft golden fringes on tergites II to VI. Punctation mostly absent or very fine, macropunctures weak on clypeus, scattered on frons, small and scattered ones on tergites II to V, becoming a little more coarse laterally and posteriorly, moderate scattered ones on sternites. Clypeus about 1.2 times as broad as long; least interocular distance about two-thirds breadth of one eye in front view; subantennal triangle 1.4 times as high as broad; flagellum slender, basal flagellomere about twice as long as broad, three-fourths as long as least interocular distance; scrobal groove and forward continuation deeply impressed; lower mesopleural fossa larger than adjacent metapleural fossa.

FEMALE. About as in male. Length 12 mm. Scutum mottled with red, clypeus about 1.3 times as broad as long, least interocular distance hardly half an eye breadth in front view; flagellum a little clubbed, basal article longer than scape and 1.2 times least interocular distance; pygidium with widely separated macropunctures, broad, sides slightly curved out, diverging at about 70 degrees.

Holotype ♂ (UCD, on indefinite loan from University of Arizona), Molino Basin, Santa Catalina Mts., 4,200 ft, Pima Co., Arizona, August 22, 1963 (G. D. Butler). Paratypes. 2 ♀, Santa Catalina Mts., Arizona: Molino Basin, September 8, 1951 (C. D. MacNeill, CAS); Sabino Basin, October 3 (C. H. T. Townsend, USNM).

The coarse but widely spaced punctures of sternite II, the enlarged lower mesopleural fossa, and the broad and sparsely punctate female pygidium are distinctive among the *montanus* group. In the other females of the group, the pygidium is much narrower and the diverging sides are practically straight.

***Pseudoplisus samiatu* R. Bohart, new species**

MALE (holotype). Length 10 mm. Black, yellow, and red. Yellow: mandible basally, clypeus and lower frons, scape and pedicel, pronotum above, lobe and nearby mesopleural spot, lateral scutal band, scutellum, metanotum, large spots on propodeal "cheeks," legs mostly and including hindtarsi, broad apical bands on tergites and sternites I to II, lateral spots on sternites III to V; red: flagellum in front, hindfemur, hindtibia partly, central spot on tergite I, subbasal band occupying one-half of tergite II, sternite IV, tinges along most yellow margins; forewing paler apically. Pubescence mostly scanty and short, pale to fulvous, coppery on scutum, that on propodeum hardly more than one ocellus diameter long; forewing base with long golden fringe; tergal fringes not conspicuous. Punctuation mostly absent; small, scattered macropunctures on frons; a few weak punctures toward sides of tergites II to VI and sternites III to VI. Clypeus about 1.5 times as broad as long; least interocular distance 0.8 times eye breadth in front view; subantennal triangle as high as broad; basal flagellomere twice as long as broad, 0.8 times least interocular distance; lower metapleural fossa considerably larger than adjacent lower mesopleural fossa; scrobal groove and forward continuation not sharp.

FEMALE. Markings about as in male. Clypeus and frons mostly black, last two tergites and corresponding sternites red, sternites I to IV mostly black. Clypeus with a few coarse medial punctures. Basal flagellomere 3.0 times as long as broad, antenna weakly clubbed. Subantennal triangle 0.6 times as high as broad. Pygidium punctostriate, sides straight and diverging at 40 degrees.

Holotype ♂ (UCD), 3 mi SE Plan de Barrancas, Jalisco, Mexico, July 8, 1963 (F. D. Parker, L. A. Stange). Paratypes. 10 ♂, 6 ♀, all from Mexico: nr Cuernavaca, Morelos (Scullen and Bolinger, Oregon State U.; R. and K. Dreisbach, Michigan State U.); Hujintlan, Tesquesquitengo and Tepoztlan (R. and K. Dreisbach, Michigan State U., UCD); 6 mi S Temixco, Morelos (F. Parker, L. Stange, UCD); nr Chilpancingo, Guerrero (UK); Zumpango, Guerrero (F. Parker, L. Stange, UCD); 19 mi SE El Camaron, Oaxaca (Scullen and Bolinger, Oregon State U.); Rio Naranjo, Colima (C. and P. Vaurie, AMNH); Suchiapa, Chiapas (P. D. Hurd, CIS).

Distinctive features are the low subantennal triangle, shaggy wing base, enlarged lower metapleural fossa, short propodeal hair, impunctate tergite II and sternite II, and narrow female pygidium which is also striate.

The *Pseudoplisus venustus* Group

The *venustus* group, which contains *butleri*, *divisus* (F. Smith), and *venustus* (Cresson) has the following diagnostic characters: a strongly bulging costal lobe near the base of the forewing; metapleural suture above the upper fossa pitted, as are the sulcus toward the front of the

scutellum and sulci bounding the propodeal enclosure; hindclaws simple. Other characteristics are: wings extensively brown, omalulus continuous with sternaulus and extending from pronotal lobe to lower mesopleural fossa, scrobal sulcus continued forward to omalulus by a groove (weak in *butleri*), lower mesopleural fossa separated by a septum from lower metapleural fossa, female pygidium punctate rather than striate (where female is known).

Pseudoplisus butleri R. Bohart, new species

MALE (holotype). Length 8.5 mm. Yellow with some black and red. Yellow: mandible mostly, clypeus and lower frons, scape and pedicel, pronotal ridge and lobe, scutellum, metanotum, large spots on propodeal "cheeks," extensive spot on mesopleuron, stripes on femora and tibiae except hindfemur, hindfemur distally spotted, foretarsus and midtarsus mostly, apical two-fifths of tergite I and three-fourths of II, III to V mostly, sternite II apically; red: basal six flagellomeres, lateral scutal mark and wing base, spots in enclosure and ground color of rest of propodeum, pleural blotches, legs mostly and including hindtarsus, basal areas of tergites I and II, most of sternites I and II. Pubescence inconspicuous, pale, a little yellowed on notum, longest on propodeum, reaching a maximum of 1.0 midocellus diameter. Punctures faint on clypeus, moderately coarse but sparse on frons, practically absent on thorax, distinct and scattered on tergite II, larger on tergites III to VI, scattered on sternites II to VI and about equal in size to those of frons. Clypeus about 1.3 times as broad as long; least interocular distance 0.7 times eye breadth in front view; subantennal triangle 1.8 times as high as broad; basal flagellomere nearly twice as long as broad, 0.7 times least interocular distance; lower mesopleural fossa larger than adjacent metapleural one; scrobal groove and forward continuation weakly indicated.

FEMALE. Unknown.

Holotype ♂ (UCD, on indefinite loan from University of Arizona), 25 mi E Pearce, Arizona, July 29, 1954, on *Baccharis glutinosa* (G. D. Butler, F. G. Werner).

The weak scrobal sulcus, high subantennal triangle, coarsely though sparsely punctate tergites II and III; and simple metapleural suture below the upper fossa distinguish the species from the other two in its group, *divisus* and *venustus*.

The *Pseudoplisus smithii* Group

The *smithii* group, which contains *nigricomus*, *rubiginosus* (Handlirsch) *smithii* (Cresson), and *tanythrix*, has the following diagnostic characters: a strongly bulging costal lobe near the base of the forewing; metapleural suture above upper fossa pitted, as are the sulcus toward front of scutellum and sulci bounding the propodeal enclosure; hindclaws with an inner basal production which opposes the claw

proper. Other characteristics are: wings brown to nearly black, omaulus continuous with sternaulus and extending from pronotal lobe to lower mesopleural fossa, scrobal sulcus continued forward to omaulus by a sharp groove, lower mesopleural fossa confluent with lower metapleural fossa (except in *rubiginosus*), female pygidium punctate rather than striate.

***Pseudopliasis nigricomus* R. Bohart, new species**

MALE (holotype). Length 12 mm. Black, yellow, and red. Yellow: mandible mostly, clypeus and lower frons, scape and pedicel, pronotal ridge and lobe, adjacent mesopleural spots, lateral scutal spot, scutellar band dully, foreleg and midleg mostly, hindfemur at apex, hindtibia outwardly, hindtarsus, apical bands on tergites I and II and sternite II, most of tergites III to VII and sternites III to VI; red: flagellomeres I to V and parts of VI and VII, scutal mottling, scutellum and metanotum partly, upper spots on propodeal "cheeks," legs and tergite I partly, subbasal band occupying one-half of tergite II, basal area of III and blotchy markings on sternites; wings nearly black. Pubescence pale fulvous on face, fulvous on vertex and scutum, dark red on pleuron, nearly black on propodeum and petiole, pale golden on rest of abdomen; outstanding hair abundant on thorax, about 1.5 ocellus diameters long on scutum, 3.0 to 4.0 on mesopleuron and propodeum, 2.0 toward base of tergite I, 1.5 toward base of sternite I. Punctuation nearly absent except for setal micropunctures and scattered macropunctures on frons. Clypeus about 1.4 times as broad as long; least interocular distance 0.8 times eye breadth in front view; subantennal triangle as high as broad; basal flagellomere twice as long as broad, as long as least interocular distance, entire antenna more than twice head breadth; lateral ocellus 2.2 times its diameter from compound eye; petiole more than twice as long as wide.

FEMALE. Similar to male. Thoracic markings fewer and redder. Clypeus sparsely punctate; a few punctures on sternites III to VI. Flagellum slender, not at all clubbed, flagellomere I about 3.5 times as long as broad. Subantennal triangle 0.6 times as high as broad. Pygidium shiny with a few large punctures, sides nearly straight and diverging at 45 degrees.

Holotype ♂ (UCD), Madera Canyon, Santa Cruz Co., Arizona, July 7, 1963 (F. D. Parker). Paratypes. All from Arizona: 5♂, 1♀, Madera Canyon (V. L. Vesterby, UCD, CAS, USNM); 1♀, Cochise Stronghold, Dragoon Mts. (C. W. O'Brien, UCD).

From others in its group, *nigricomus* differs by the nearly black propodeal hair, slender petiole (from *rubiginosus* and *smithii*), confluent lower pleural fossae (from *rubiginosus*), blackish wings (from *rubiginosus* and *tanythrix*), impunctate tergite II (from *rubiginosus*), and simple male antenna (from *tanythrix*).

***Pseudoplisus tanythrix* R. Bohart, new species**

MALE (holotype). Length 13 mm. Black, yellow, and red, wings light brown, darkest in marginal cell. Yellow: mandible, clypeus and lower frons, scape in front, pronotal ridge and lobe, adjacent mesopleural spot, lateral scutal spot, bands across scutellum and metanotum, propodeum mostly, legs partly, including all of hindtarsus, tergites I to III and sternite I to II mostly, tergites III to VII with broad apical bands; red: antenna mostly but a little darker behind on last 5 articles, thorax extensively including scutum and lower mesopleuron mostly, propodeal enclosure, median spot on tergite I, basal band on tergite II, basal marks on other tergites, sternites III to VI. Pubescence pale fulvous, abundant on thorax, about 1.0 to 2.0 ocellus diameters long on scutum, 2.0 to 4.0 on mesopleuron and propodeum, 3.0 toward base of tergite I, 1.5 toward base of sternite I. Punctuation nearly absent except for setal micropunctures and scattered macropunctures on frons; few punctures toward sides of tergites III to VI and on sternites III to VI. Clypeus about 1.4 times as broad as long; least interocular distance 0.8 times eye breadth in front view; subantennal triangle a trace higher than broad; basal flagellomere twice as long as broad, 0.8 times least interocular distance, entire antenna 1.7 times head breadth, all flagellomeres except last one with shiny tyloides beneath; occipital carina unusually prominent; lateral ocellus 1.3 times its diameter from compound eye; petiole more than twice as long as wide.

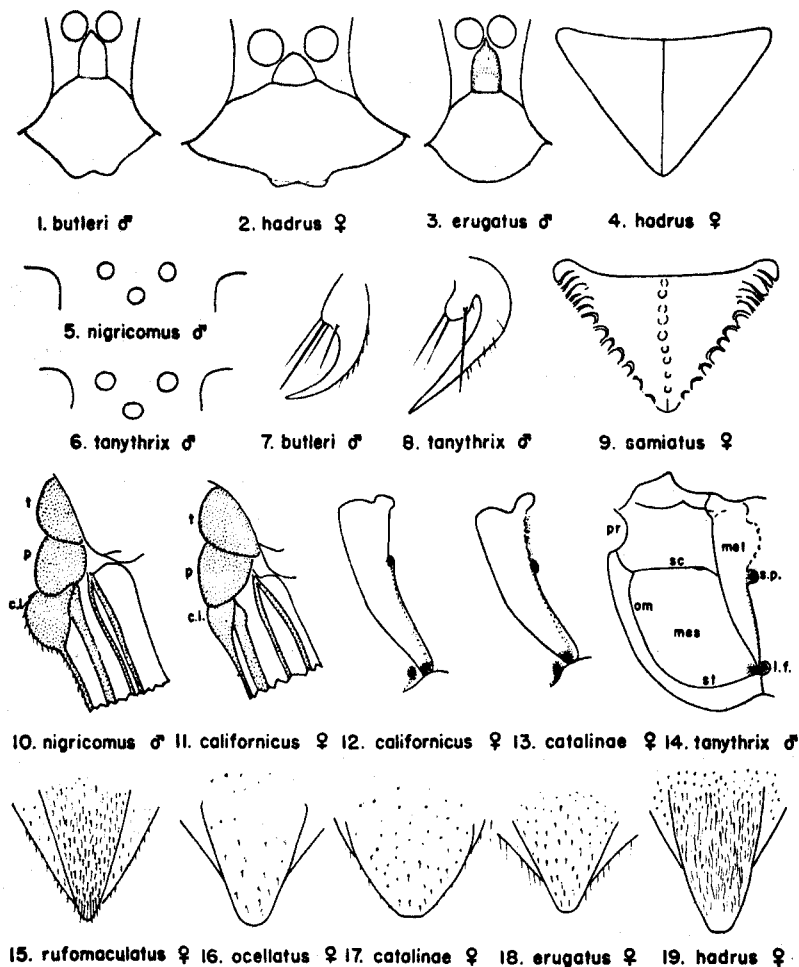
FEMALE. Unknown.

Holotype ♂ (CAS), Kenton, Oklahoma, July 3, 1934 (A. E. Pritchard). Paratype. ♂ (USNM), Chisos Mts., Brewster Co., Texas, June 12, 1908 (Mitchell and Cushman).

The paratype is somewhat darker on the thorax and 14 mm long. The species seems closest to *nigricomus*, sharing the confluent pleural fossae, long and abundant thoracic hair, reduced punctuation, and slender petiole. However, *tanythrix* differs in its light brown wings, shorter and tyloid-bearing antenna, narrower frons above, and pale fulvous propodeal hair.

The *Pseudoplisus fasciatus* Group

The *P. fasciatus* group contains *fasciatus* (W. Fox), *rufomaculatus* (W. Fox), and the new species *californicus*, *ocellatus*, *flavidulus*, and *imperialis*. The group has the following diagnostic characters: a weak costal lobe near the base of the forewing, metapleural suture pitted above the upper fossa, the sulcus toward the front of the scutellum and sulci bounding the propodeal enclosure pitted, hindclaws simple. Other characteristics are: subantennal triangle about as high as broad in female, higher than broad in male; flagellar article I about twice as long as broad in male, nearly three times in female; wings lightly stained except in and close to marginal cell of forewing; omaulus con-



FIGS. 1-19. Named species of *Pseudoplisus*. FIGS. 1-3, clypeus and associated area of frons. FIG. 4, propodeal enclosure. FIGS. 5-6, vertex. FIGS. 7-8, hindtarsal claw. FIG. 9, propodeal enclosure. FIGS. 10-11, base of forewing, t = tegula, p = posttegula, c.l. = costal lobe. FIGS. 12-13, metapleuron. FIG. 14, pleuron, pr = pronotal lobe, sc = scrobal sulcus, om = omaulus, mes = mesopleuron, st = sternaulus, met = metapleuron, s.p. = superior pit, l.f. = lower fossa. FIGS. 15-19, pygidium. FIGS. 1-8, 10, 14, 19 are of holotypes; other figures, except 15, are of paratypes.

tinuous with sternaulus and extending from pronotal lobe to lower mesopleural fossa; scrobal sulcus continued forward to omaulus by a sharp groove; lower mesopleural fossa separated by a visible septum

from lower metapleural fossa; tergites III and IV plainly punctate medially; female pygidium punctate rather than striate.

With respect to the weak costal lobe at the base of the forewing, species in this group resemble most *Gorytes*. However, the presence in the latter of longitudinal striae on the propodeal enclosure is an easy character for differentiation. In other groups of *Pseudoplisus* the forewing lobe bulges strongly.

***Pseudoplisus californicus* R. Bohart, new species**

MALE (holotype). Length 9.5 mm. Black, marked with yellow as follows: mandible spot, clypeus, lower frons, scape, pedicel and spot at base of flagellar article I, pronotal ridge and lobe, lateral scutal stripe, scutellum, metanotal spot, large spots on upper mesopleuron and on propodeum, legs extensively in front except for hindtarsi, broad apical bands on tergites I to V, those on I and II prolonged forward laterally, spot on VI, sternites II to IV mostly, V and VI partly. Pubescence pale, inconspicuous, forming a silver mat in some lights on upper half of clypeus and lower frons; erect hair on propodeum a little shorter than midcellus. Punctuation absent or mostly fine; close on clypeus with a few larger punctures; scattered coarse punctures on frons; propodeal "cheeks," mesopleuron, and tergite I practically impunctate, tergite II with scattered fine but distinct punctures, a little coarser laterally. Clypeus about 1.6 times as broad as long; least interocular distance a little less than eye breadth in front view.

FEMALE. About as in male. Length 10.5 mm; pygidium mostly yellow, smooth, with well spaced punctures, sides angled at about 45 degrees.

Holotype δ (UCD), Santa Ynez Mts., Santa Barbara Co., California, June 24, 1959 (R. M. Bohart). Paratypes. 33 δ , 7 f , all from California: Santa Ynez Mts., Big Pine Creek (Inyo Co.), Sespe Canyon (Ventura Co.), Cajon, Whitewater Canyon, and San Jacinto Mts. (Riverside Co.), Cathedral City, Temecula, Idyllwild, Morongo Valley, Point Loma, and Newton (San Diego Co.).

There is close resemblance to *ocellatus*, which is similar in size and markings. Also, the two species are at least partially sympatric. In all the material I have seen, the two small spots anteriorly on tergite I of *ocellatus* are differentiating. More significant are the clypeal differences. In *californicus* the clypeus in both sexes is noticeably silvery on the upper one-half, and the few macropunctures are mostly medial. In *ocellatus* the clypeus is nearly glabrous but extensively covered with macropunctures.

***Pseudoplisus ocellatus* R. Bohart, new species**

MALE (holotype). Length 9.5 mm. Black, marked with yellow as follows: mandible mostly, clypeus, lower frons, scape, pedicel, pronotal ridge and lobe, lateral scutal stripe, scutellum, metanotum, extensive

mesopleural spot, area in front of midcoxae, metapleuron, propodeal "checks," legs mostly, broad apical bands on tergites I to VI, those on I and II prolonged forward laterally, separate pair of spots anteriorly on I, and anterior band on II connected with apical band, sternites I and V partly, II to IV mostly; light orange: flagellum in front, basal four hindtarsal articles. Pubescence pale, inconspicuous, not forming a silver mat on clypeus or frons; erect hair on propodeum a little longer than midocellus. Punctuation absent or mostly fine; abundant and extensive macropunctures on clypeus; scattered coarse punctures on frons; propodeal "cheeks," mesopleuron, tergite I and tergite II medially, practically impunctate. Clypeus about 1.7 times as broad as long; least interocular distance about two-thirds eye breadth in front view.

FEMALE. About as in male. Length 10.5 mm; pygidium mostly yellow, smooth with well-spaced punctures, sides angled at about 45 degrees.

Holotype ♂ (UCD), Big Pine, Inyo Co., California, June 20, 1962 (A. A. Grigarick). **Paratypes.** 9♂, 13♀, all from California: Big Pine, Monticello Dam (Napa Co.), Kaweah, Yucaipa, Llano, Cajon, Cajon Pass and Junction, Mitchell Canyon (San Bernardino Co.), Beaumont, Riverside, San Jacinto Mts., Gavilan (Riverside Co.), Sorrento Beach, Pine Valley, Newton, Jacumba (San Diego Co.). Other specimens examined. 1♂, San Quintin, Baja California, Mexico.

Although the similarity to *californicus* is striking, *ocellatus* is a yellower species, and the pair of spots on tergite I makes recognition easy. The extensively punctate and relatively unsilvered clypeus in both sexes is distinguishing, also.

***Pseudoplisus flavidulus* R. Bohart, new species**

MALE (holotype). Length 8.5 mm. Yellow, marked with orange, red, and a little black or brown. Red: frons and occiput partly, flagellum in front except toward apex, scutum except laterally, spots or stains on pleuron and propodeum mostly along sutures or carinae, thoracic venter mostly, legs partly, especially on femora, basal two-thirds of tergite I, one-fourth of tergite II, basal and mostly concealed areas on remaining tergites, basal areas of sternites, VI mostly; black: lateral spot on upper frons; brown: flagellum and hindfemur posteriorly, hindtarsus entirely. Pubescence pale, inconspicuous, forming a silver mat in some lights on upper clypeus and lower frons; erect hair on propodeum a little longer than midocellus. Punctuation absent or mostly fine; clypeus hardly punctate, scattered punctures on frons; propodeal "cheeks," mesopleuron, tergite I, and tergite II practically impunctate medially. Clypeus about 1.5 times as broad as long; least interocular distance about three-fourths eye breadth in front view.

FEMALE. Unknown.

Holotype ♂ (UCD), Brawley, Imperial Co., California, June 18,

1960 (G. E. Bohart). Paratype. ♂, Deep Canyon, Riverside Co., California, Sept. 5, 1963 (M. E. Irwin, U. C. Riverside).

The yellow and red color pattern distinguishes this species from others in the group except *imperialis*, which has the hindtarsi pale red and macropunctuation medially on tergite II.

***Pseudoplisus imperialis* R. Bohart, new species**

MALE (holotype). Length 9.5 mm. Yellow, marked with orange red as follows: flagellum, upper frons mostly, scutum in median area, stains along thoracic sutures, venter of thorax mostly, legs partly, including posterior aspect of hindtibia and hindtarsus, tergite I basally, stains on some sternites, especially on I and VI. Pubescence pale, inconspicuous, forming a silver mat in some lights on upper clypeus and lower frons; erect hair on propodeum a little longer than midocellus. Punctuation absent or mostly fine on head and thorax, a few scattered macropunctures on clypeus and more on frons; propodeal "cheeks," mesopleuron, and tergite I practically impunctate; medial area of tergite II with macropunctures about three diameters apart. Clypeus about 1.6 times as broad as long; least interocular distance about two-thirds eye breadth in front view.

FEMALE. Unknown.

Holotype ♂ (USNM), Imperial Co., California, June, 1911 (J. C. Bridwell). Paratypes. 1♂, same data as type (UCD); 1♂, El Centro, Imperial Co., California, October 5, 1929 (J. D. Gunder, CAS).

The mostly yellow color distinguishes this species from other *Pseudoplisus* except *flavidulus*. From the latter, *imperialis* differs in having pale red hindtarsi and medial macropunctures on tergite II.

The *Pseudoplisus abdominalis* Group

The *P. abdominalis* group contains *abdominalis* (Cresson), *aequalis* (Handlirsch), and the new species *claripennis*, *crugatus*, and *hadrus*. The group has the following diagnostic characters: a strongly bulging costal lobe near base of forewing; metapleural suture not pitted above the upper fossa; sulcus toward the front of the scutellum pitted, but lateral sulci of the propodeal enclosure simple; hindclaws simple. Other characteristics are: omaulus continuous with sternaulus and extending from pronotal lobe to lower mesopleural fossa; scrobal sulcus continued forward to omaulus by a sharp groove.

The group is less homogeneous than the *fasciatus* group, and *P. hadrus* is particularly distinctive.

***Pseudoplisus claripennis* R. Bohart, new species**

MALE (holotype) Length 10 mm. Black, marked with yellow as follows: mandible spot, clypeus, scape and pedicel in front, lower frons laterally, pronotal ridge and lobe, two spots on mesopleuron, scutum

laterally, posterior band on scutellum, spots on propodeal "cheeks," legs partly, apical bands on tergites I to VI, irregular apical bands on sternites I to IV; legs partly red, hindtarsi brownish; wings basally reddish, otherwise nearly clear except for dark marginal cell and nearby area. Pubescence pale, rather long and silvery on clypeus, off-white to fulvous elsewhere, as long as 2.0 midocellus diameters on clypeus, frons, pleuron, and propodeum, shorter but prominent on scutum. Punctuation mostly fine; coarse on upper frons, scattered micropunctures on scutum; tergites and sternites II and III with distinct but small and scattered punctures. Clypeus about 1.5 times as long as broad; least interocular distance about three-fourths eye breadth in front view; subantennal triangle about as high as broad; basal flagellar article twice as long as broad, last article nearly 3.0 times as long as broad; lower mesopleural and metapleural pits confluent.

FEMALE. Unknown.

Holotype ♂ (UCD), Madera Canyon, Santa Rita Mts., Arizona, July 11, 1957 (L. Stange).

The combination of nearly clear wings, confluent pleural pits, and punctate tergites I and II is distinctive in the group.

***Pseudoplisus erugatus* R. Bohart, new species**

MALE (holotype). Length 10.5 mm. Red, marked with yellow and black. Yellow: mandible spot, clypeus, lower frons, scape and pedicel in front, pronotal ridge and lobe, mesopleural spot, scutellum, metanotum, large propodeal spots, legs partly, including hindtibiae mostly, broad apical bands on tergites I to VI and sternites II to IV; black: upper frons and back of head, spots or stains on thorax associated with sutures or carinae, extreme base of tergites I to IV; brown: flagellum toward apex above, hindfemur above and inside, wings extensively. Pubescence short, off-silvery on face, fulvous to brownish elsewhere, that on propodeum shorter than diameter of midocellus, scutum with thick and golden brown pile. Punctuation absent or mostly fine, scattered punctures on clypeus, larger ones on upper frons, tergites practically impunctate medially but with a few micropunctures laterally, sternite II with coarse, well-spaced punctures. Clypeus about 1.2 times as long as broad; least interocular distance about three-fifths eye breadth in front view; subantennal triangle nearly twice as high as broad; basal and apical flagellar articles each twice as long as broad; lower mesopleural and metapleural pits separated.

FEMALE. About as in male. Length 11.5 mm; clypeus 1.5 times as broad as long, with scattered coarse punctures; subantennal triangle 1.8 times as high as broad; pygidium yellow, red at apex, with large but separated striatiform punctures, sides of pygidium angled at 60 degrees.

Holotype ♂ (CAS), Las Animas, Sierra Laguna, Baja California, Mexico, October 12, 1941 (E. Ross and G. Bohart). Paratypes. 1♂,

3 ♀, all from Baja California: Las Animas and Big Canyon, Sierra Laguna (E. Ross and G. Bohart, UCD, CAS); 10 mi E San Ignacio (E. Ross and G. Bohart, CAS); Las Parras (W. M. Mann, USNM). Paratype dates were in September and October.

The unusually narrow least interocular distance, mostly red and yellow pattern, reddish brown wings, and nearly impunctate tergites characterize this species and separate it from others in the group.

***Pseudoplisus hadrus* R. Bohart, new species**

FEMALE (holotype). Length 13.5 mm. Robust; black, marked with yellow as follows: mandible spot, clypeus except at extreme apex, lower frons, antenna in front but becoming reddish toward apex, pronotal ridge and lobe, lateral scutal stripe, bands across scutellum and metanotum, a metapleural and two mesopleural spots, large propodeal spots, legs partly, including most of hindtarsus, broad apical bands (narrowed medially) on tergites I to V and sternites I to III, pygidium, sternites IV and V slightly; wings reddish yellow, darker in marginal cell of forewing. Pubescence silvery on lower part of face, fulvous to brownish elsewhere, inconspicuous on gaster; outstanding hair as long as 2 midocellus diameters on clypeus, 1.5 on frons, 2.0 on vertex, 1.5 on scutum and mesopleuron, 2.0 on propodeum. Punctuation mostly absent or fine, scattered coarse punctures on clypeus and frons, scattered fine ones on scutum, tergites III to V and sternites III to VI, tergites I to II and sternite II nearly impunctate. Clypeus produced and a little emarginate apically, production about one-half clypeal length or one-fourth clypeal breadth; least interocular distance equal to eye breadth in front view; subantennal triangle broader than high; basal flagellomere four times as long as broad; lower mesopleural and metapleural pits separated; pygidium punctostriate, smooth at apex, sides angled at 45 degrees.

Holotype ♀ (KU), 2 mi S Tzitzio, Michoacán, Mexico, July 29, 1962 (U. Kansas Mex. Exped.).

The unusual clypeus, scattered fine punctures on tergites III and IV, nearly impunctate sternite II, long basal flagellomere, and striate pygidium distinguish the species from others in the group, especially *aequalis* and *claripennis*, which have somewhat similar markings.