



<https://www.biodiversitylibrary.org/>

Proceedings of the United States National Museum

Washington Smithsonian Institution Press, [etc.]

<https://www.biodiversitylibrary.org/bibliography/7519>

v.75=no.2772-2797 (1929):

<https://www.biodiversitylibrary.org/item/32391>

Article/Chapter Title: A new species of mosquito from Montana, with annotated list of the species known from the State

Author(s): Dyar, Harrison G.

Page(s): Page [1], Page 2, Page 3, Page 4, Page 5, Page 6, Page 7, Page 8

Holding Institution: Smithsonian Libraries and Archives

Sponsored by: Smithsonian

Generated 9 January 2026 3:02 PM

<https://www.biodiversitylibrary.org/pdf4/1874879i00032391.pdf>

This page intentionally left blank.

A NEW SPECIES OF MOSQUITO FROM MONTANA, WITH
ANNOTATED LIST OF THE SPECIES KNOWN FROM
THE STATE

By HARRISON G. DYAR

Custodian of Lepidoptera, United States National Museum

The discovery of a new species of mosquito in Montana is an unexpected and noteworthy event, not only because the State has been so often and so well explored for its mosquito fauna but because the species hitherto found have all an extended range outside of the State. That the present new species is confined to Montana is hardly to be expected, yet it has so far eluded intensive collecting elsewhere.

This discovery is due to the skill of G. Allen Mail, acting for the Bozeman Experiment Station under the direction of W. B. Mabee, extension entomologist. Mr. Mail formerly acted as assistant to Eric Hearle, the Canadian mosquito expert, during the campaign at Banff which was so satisfactorily carried out from the viewpoint of the visiting tourist.

AËDES SCHIZOPINAX, new species

Female.—Proboscis rather long, slender, uniform, black. Palpi short, about one-eighth the length of the proboscis, black. Occiput with bronzy brown narrow curved scales. Mesonotum with bronzy-brown scales; two broad darker brown bands are faintly relieved, lighter edged outwardly posteriorly, separated by a very narrow median bare line; posteriorly the scales and hairs are lighter, with a faint whitish tint. Abdomen black, with broad basal segmental sordid white bands, the last two segments very largely whitish; venter whitish scaled, with more or less developed median black dashes. Legs black, the femora pale beneath. Wing scales hairlike, all dark. A rather small species, about the size of *cataphylla*.

Male.—Palpi as long as the proboscis, the last joint slightly club-shaped, the penultimate joint with long hairs, black. General coloration as in the female, the vestiture of the mesonotum slightly more sparse and open. Hypopygium: Sidepiece slender, uniform, about three times as long as wide; apical lobe distinct, narrow, conical, with rather few fine, short, curved hairs; basal lobe broadly expanded, thin, dotted with tubercles bearing fine short setae; on the inner angle a slightly rounded prominence bears several long setae, the

innermost of which forms a slender spine with recurved tip. Clasper moderate, slightly expanded on basal two-thirds, the apical third with several setae outwardly; a long terminal spine. Tenth sternites large, revolute, and thickened on one margin. Claspette stem rather short, slender, the filament about as long as it, curved sickle shaped, rather broad and thick, but without marginal expansion. Ninth tergites small with about five fine setae irregularly inserted.

Larva.—Head rounded, about as wide as long, black. Head hairs in coarse bunches, the upper in three, the lower in two, though in one culture there is much variation, the number of hairs being generally increased. Antennae moderate, curved and slightly tapered, spinulose, with a hair tuft just before the middle. Skin glabrous. Lateral comb of the eighth segment of about 50 scales, each with long thorn-shaped central point and only traces of lateral spinules. Air tube moderate, tapered, about three times as long as wide; pecten coarse, evenly spaced, followed by a 4-haired tuft at about the middle of the tube. Anal segment with the plate reaching nearly to the ventral line, but divided to base, with irregular edge. Dorsal tuft a long hair and 6-haired brush on each side. Ventral brush with tufts preceding nearly to base.

Type.—Male; allotype, female; paratypes, five males and seven females, Cat. No. 41709, U.S.N.M.; Story Creek railway crossing; larvae in an overflow from a permanent pool, April 6, 1928 (G. Allen Mail); Nigger Hollow, larvae in cattle tracks, May 23, 1928 (G. Allen Mail); Mammoth Hot Springs, larvae in game tracks, May 30, 1928 (G. Allen Mail); Sedan, larvae in scummy seepage water in the open, May 28, 1928 (G. Allen Mail). These localities, as far as they appear on the map, are in Madison and Gallatin Counties.

This species obviously belongs in the *puncter* group, though the adult resembles a small *intrudens* in coloration. The larva is distinctive, having the plate of the anal segment divided along the ventral line.

ANNOTATED LIST OF THE MOSQUITOES OF MONTANA

The following species of mosquitoes are known to occur in Montana. Bibliographical references not here included will be found in my recent work, "The Mosquitoes of the Americas" (Carnegie Institution, 1928).

PSOROPHORA SIGNIPENNIS Coquillett

Recorded by me from Laurel.¹ Later, in 1921, I visited Glasgow and Poplar in a time of mosquito abundance and found this species not infrequent, although still a rarity as compared with the swarms of other forms. At Poplar, larvae in Stage I were found in a small rain pool. Their development was very rapid, adults resulting in about five days.

¹Ins. Ins. Mens., vol. 5, p. 116, 1917.

AÈDES TRIVITTATUS Coquillett

Recorded by me from Laurel. Found also at Glasgow, July 11, 1921, and at Poplar July 14 of the same year.

AÈDES PUNCTOR Kirby

Mentioned in my paper on the mosquitoes of the Glacier National Park² not to occur. On the second trip to the park in 1926 larvae were found in early forest pools, especially cold ones still containing snow. The larvae and males are of normal structure, but the females invariably had the dorsal mesonotal stripe divided and were thus indistinguishable from *communis*. Only captured adults were taken in 1921, which accounts for my failure to recognize the species. Apparently this coloration obtains in all specimens taken in Montana. I have examined specimens bred at Chestnut, May 2, 1928, and Kings Hill, June 11, 1928, by G. Allen Mail.

AÈDES HIRSUTERON Theobald

Specimens were taken in the Glacier National Park in 1921;³ but in 1926 none were found, as it was a "dry year," in which the flood pools were not filled. The species occurred to me also at Livingston,⁴ and I have seen a number of captured specimens from different localities submitted by W. B. Mabee. I took many specimens at Glasgow on July 11, 1921, and at Poplar on July 14 of the same year.

AÈDES ALDRICHI Dyar and Knab

Found at Big Timber and elsewhere in Montana in 1917,⁵ but I have no recent records. It was very abundant in northern Idaho in 1921.

AÈDES IDAHOENSIS Theobald

Common on the dry plains and valleys.⁶ I have also seen bred specimens from near Sula, on May 20, 1928, from a roadside pool filled by river overflow on the East Fork of the Bitter Root River and from Hamilton on June 3, 1928, from a flooded meadow, both collections made by Mrs. Dr. R. R. Parker. Perhaps *idahoensis* has more connection with flood water than has been heretofore supposed.

AÈDES SPENCERII Theobald

This is rare in Montana, as the grassy plains which it favors lie to the east of the State. There are some such at high altitudes, however, and in 1926 Paul Schoenberger, park ranger, kindly scouted over Flattop Mountain in the Glacier National Park on July 4 and brought back safely two females of this species. Mr. Mabee has submitted a single specimen of the species taken at Trident on July 28, 1928,

²Ins. Ins. Mens. vol. 10, p. 82, 1922.

⁵Ins. Ins. Mens., vol. 5, p. 121, 1917.

³As *aestivalis* Ins. Ins. Mens., vol. 10, p. 82, 1922.

⁶Ins. Ins. Mens., vol. 5, p. 120, 1917.

⁴Ins. Ins. Mens., vol. 11, p. 36, 1923.

in a rather shallow canyon in which are grassy spots surrounded by willows.

AËDES COMMUNIS DeGeer

Very abundant in the forests of Glacier National Park both in 1921 and 1926. The adults are very variable in size and ornamentation. I have examined bred specimens from Chestnut May 2, 1928, and Squaw Creek, May 6, 1928, both collections made by G. Allen Mail.

AËDES PIONIPS Dyar

Occasional in the forests of the Glacier National Park.⁷ I also received specimens from W. B. Mabee collected on June 28, 1916, at Bozeman, Gallatin County, in a very shallow pool in a clover field where clover leaves practically covered the pool. The field is near the center of Gallatin Valley, some 4 or 5 miles from the nearest mountains. This is very unusual occurrence for the species (1388).

AËDES CATAPHYLLA Dyar

In the Glacier National Park in 1926 the "graybacks" were the first mosquito on the wing, but not in large numbers. Larvae had practically all passed at the time of my arrival and the adults disappeared soon also. The breeding places seem to be in the edges of large marsh pools. Worn females were found around the edges of one such, where they had evidently been ovipositing. The central part of these pools are permanent, but the edges go dry for long distances. G. Allen Mail bred a culture from Bridger Canyon, May 1, 1928, where they were associated with *Aedes increpitus mutatus* Dyar.

AËDES IMPIGER Walker

This occurred in the Glacier Park with *Aedes cataphylla*, the larvae having all passed by April 15, 1926; but a few undoubted adults were taken on the wing. Mr. Mabee transmitted bred specimens, but I have not the exact data before me (473).

AËDES NEARCTICUS Dyar

This is the "little black mosquito" frequenting all the higher passes of the Glacier Park in midsummer. In 1926 Park Ranger Paul Schoenberger went to the head of Swiftcurrent Pass and to the foot of the Grinnell Glacier for me and found this species breeding in large numbers together with *communis* and *pullatus*. The altitude is only about 5,300 feet, but the presence of the ice cools the region. Eric Hearle, at Banff, did not find this species breeding below 6,000 feet. As with the Californian high altitude form, *Aedes ventrovittis* Dyar, the distribution appears to be upward, as found by Professor Freeborne.⁸

⁷ Ins. Ins. Mens., vol. 10, p. 85, 1922.

⁸ Univ. of Calif. Pubs., Tech. Bull. Coll. Agr., Agr. Exper. Station, vol. 3, p. 378, 1926. The females are not found biting in the forest.

AÈDES DIANTAEUS Howard, Dyar, and Knab

Adults were taken by me in 1921 and larvae in several of the early spring pools in 1926 in the Glacier Park. Some bred adults were indistinguishable in coloration from *communis*, although the normal form also occurs in the park. I have no other Montana records.

AÈDES INTRUDENS Dyar

Breeding in the Glacier Park with *diantaeus*, the larvae fully as rare in 1926. Owing to the habit of the adult of entering houses, specimens of this species were taken almost every day to the middle of July in the cabin of the North Fork Ranger Station, although apparently passed out of doors. Mr. Mabee submitted specimens bred at Darby, May 30, 1928, by Mrs. Dr. R. R. Parker from a shaded pool in woods. Adults issued on June 3.

AÈDES PULLATUS Coquillett

Breeding in the early spring pools at higher elevations in the Glacier Park, but always a late inhabitant of them, the larvae lingering after the *communis* and *nearcticus* had long emerged. Mr. Mabee submitted specimens as follows: Chestnut, May 2, 1928 (G. Allen Mail); Karse, W. Gallatin, May 3, 1928 (G. Allen Mail); Squaw Creek, May 6, 1928 (G. Allen Mail); West Gallatin, May 24, 1928 (G. Allen Mail); Sedan, May 28, 1928 (G. Allen Mail); Ross' Peak Ranger Station, May 28, 1928 (G. Allen Mail); King's Hill, June 11, 1928 (G. Allen Mail); Darby, May 30, 1928 (Mrs. Dr. R. R. Parker).

AÈDES TRICHURUS Dyar

This species was common in the North Fork ranger station of the Glacier National Park in the 1926 season. The station is on a high, dry bank, 100 feet above the Flathead River, and no mosquito breeding occurs in the vicinity. However, some 2 miles back at the foot of the Apgar Mountains a large marsh occurs. There is also a similar marsh across the river, outside of the park, near Lake Five. This also is about 2 miles from the station in a straight line. *Aedes trichurus* from these two foci, but especially from the latter, were numerous, being the commonest mosquito at the station. Great swarms of males were seen, first noted a mile from the Lake Five marsh. The swarms broke up, crossed the river, and could be found here and there in the forest in the park for several days. They swarmed shortly before sunset, dispersing at dark. The females bit at all times, day and night, though their approach was timid, and they were easily driven away.

AÈDES EXCRUCIANS Walker

This was the common ring-legged mosquito in the Glacier Park in 1926. Great numbers emerged from the marsh at the foot of the Apgar Mountains near the North Fork station. Females were flying till August. Mr. Mabee submitted specimens labeled "Central Park (flood water), June 5, 1928 (G. Allen Mail)."

AÈDES FITCHII Felt and Young

Found commonly in the Glacier Park in 1921. Mr. Mabee submitted specimens from the following localities: Glasgow, April 13, 1928 (G. Allen Mail); West Gallatin, May 24, 1928 (G. Allen Mail); Sedan, May 28, 1928 (G. Allen Mail); Malta, 1928 (G. Allen Mail); near Hamilton, Skalkaho Canyon, June 8, 1928 (Mrs. Dr. R. R. Parker).

AÈDES INCREPITUS MUTATUS Dyar

Found in the Glacier Park in 1921 in the valleys to the east of the Continental Divide. This was the commonest of the species of the 1928 catch submitted by Mr. Mabee. Mr. Mail preserved many larvae, which differ from the larvae of *Aedes increpitus* of California in having multiple head hairs. The usual form is upper in 2 or 3, lower single; but specimens occurred with more hairs, the most observed being upper in 6, lower in 5. Localities noted as follows: Near Manhattan, April 6, 1928 (G. Allen Mail); Bridger Canyon, May 1, 1928 (G. Allen Mail); Glasgow, April 13, 1928 (G. Allen Mail); Three Forks, 1928 (G. Allen Mail); Montrellis, May 2, 1928 (G. Allen Mail); Spring Hill Road, 5 miles out of Bozeman, May 22, 1928 (G. Allen Mail); Darby, May 30, 1928 (Mrs. Dr. R. R. Parker); Victor, June 25, 1918 (R. R. Parker).

AÈDES FLAVESCENS Müller

Recorded from Montana,⁹ but very rare in the State. Mr. Mabee submitted specimens, Malta, 1928 (G. Allen Mail), and some others (Nos. 245, 246, and 251) of which I did not get the exact data.

AÈDES RIPARIUS Dyar and Knab.

I have no further record of this species from the State than the single female from Dillon mentioned by me.¹⁰

AÈDES DORSALIS Meigen

Very common in the dry river valleys in the eastern part of the State. In the summer of 1926 a migration was observed to the westward. No adults were found through the forest, but great numbers of them settled in a small grassy clearing comprising the farm of Albert Jack, bordering the Flathead River and just outside the park. A few strayed across into park lands, but most lay in wait for anyone invading the grass. They were found for a couple of weeks at longest. No breeding area for this species occurred in the park, for a drought existed over the whole west slope down to the Kalispell region. There were rains on the plains to the east from whence this flight must have come, probably following the river valleys instead of across country as in the case of the *nigromaculis* flight. Mr. Mabee submitted specimens from the following localities: Glasgow, April 13, 1928 (G. Allen Mail); Malta, 1928 (G. Allen Mail); Moiese, 1928 (G. Allen Mail); Three Forks, May 18, 1928 (G. Allen Mail);

⁹ Ins. Mens. vol. 5, p. 113, 1917.

¹⁰ Ins. Ins. Mens., vol. 5, p. 113, 1917.

Nigger Hollow, May 23, 1928 (G. Allen Mail); Sedan, May 28, 1928 (G. Allen Mail); Trident, June 5, 1928 (G. Allen Mail); King's Hill, June 11, 1928 (G. Allen Mail).

AÈDES CAMPESTRIS Dyar and Knab

Occurring with *dorsalis* in small proportion. Taken by me at Glasgow and Poplar in 1921. Mr. Mabee submitted specimens from Three Forks May 23, 1928 (G. Allen Mail).

AÈDES CANADENSIS Theobald

Rather common in the dry river valleys and invading the forest at the edges. In the park in 1926 larvae occurred as residual occupants of the less elevated forest pools; but, owing to early drying, few if any emerged. No adults were seen flying in the park area that season. Mr. Mabee submitted specimens from the following localities: Sedan, May 28, 1928 (G. Allen Mail); Darby, May 30, 1928 (Mrs. Dr. R. R. Parker); Como, May 30, 1928 (Mrs. Dr. R. R. Parker); near Hamilton, Skalkaho Canyon, June 3, 1928 (Mrs. Dr. R. R. Parker); Hamilton, June 3, 1928 (Mrs. Dr. R. R. Parker).

AÈDES NIGROMACULIS Ludlow

A common species in the dry river valleys of the eastern part of the State. A considerable flight of this species occurred in July, 1926, into the Glacier Park area. Specimens were taken on Flattop Mountain and the following day at the North Fork ranger station. Apparently the flight was in a southwesterly direction across the mountains, across open and forested country alike, from the plains to the east. These adults must have flown the width of the park, 30 miles or more. Mr. Mabee submitted specimens from Malta, July 18, 1928 (G. Allen Mail).

AÈDES TRISERIATUS Say

The only record from the State is the single female taken by me.¹¹

AÈDES VEXANS Meigen

Very abundant in the river valleys, breeding with *dorsalis*. The adults seek shade, while *dorsalis* flies in the open. The species invades the forest only to a slight degree. No specimens of larvae or adults were seen in the Glacier Park in 1926. Mr. Mabee submitted specimens from Three Forks May 18, 1928 (G. Allen Mail).

AÈDES CINEREUS Meigen

Larvae occurred as residual inhabitants of almost every forest pool in the Glacier Park in 1926, but very few of them could have emerged that year on account of the early drying. No adults were seen on the wing. Mr. Mabee submitted specimens from the following localities: Sedan, May 28, 1928 (G. Allen Mail); near Sula, May 20, 1928 (Mrs. Dr. R. R. Parker); Darby, May 30, 1928 (Mrs. Dr. R. R. Parker); Como, May 30, 1928 (Mrs. Dr. R. R. Parker).

¹¹ Ins. Ins. Mens., vol. 5, p. 118, 1917

CULICELLA IMPATIENS Walker

In the Glacier Park in 1926 overwintering adults were quite fond of entering the cabin in early spring, in company with *Anopheles maculipennis*. None were thus seen after June, and later larvae began to be found in cold spring pools after the snow water and river floods had wholly passed. Adults were very common at dusk at Many Glacier on the still evening of June 2. A still evening is rare at that spot, however. Mr. Mabee submitted specimens from Hamilton June 3, 1928 (Mrs. Dr. R. R. Parker).

CULICELLA INCIDENS Thomson

Not found in the Glacier Park in 1921, although it occurred in several isolated spots in 1926. The larvae inhabit late pools of a generally permanent character. They occurred in an old barrel partly filled with water at the North Fork station. Mr. Mabee submitted specimens from Hamilton June 3, 1928 (Mrs. Dr. R. R. Parker).

CULICELLA INORNATA Williston

Very frequent in warmer regions in the summer time, breeding in stagnant pools. Larvae were found abundantly in a water tank at Kalispell in 1926. Mr. Mabee has submitted specimens from the following localities: Three Forks, July 18, 1928 (G. Allen Mail); Skalkaho Canyon, June 3, 1928 (Mrs. Dr. R. R. Parker); Hamilton, July 6, 1928 (Mrs. Dr. R. R. Parker).

CULICELLA ALASKAENSIS Ludlow

Not hitherto recorded from the State. Mr. Mabee submitted a specimen from near Squaw Creek ranger station at about 6,000 feet altitude May 6, 1928 (G. Allen Mail).

CULEX TARSALIS Cequillett

Very common in the summer time in the warmer parts of the State, breeding with *Culicella inornata*. Mr. Mabee submitted specimens from the following localities: Skalkaho Canyon, June 3, 1928 (Mrs. Dr. R. R. Parker); Hamilton, June 3, 1928 (Mrs. Dr. R. R. Parker).

CULEX APICALIS Adams

The larvae were common in late summer in the Glacier Park in 1926 in all the cold spring pools. As this species does not bite warm-blooded animals, the adults are always inconspicuous and encountered only by beating.

ANOPHELES MACULIPENNIS Meigen

The "malaria mosquito" was rather common on the west side of the Glacier Park in 1926, hibernating adults entering the cabin in early spring. Larvae were found in the warmer algae-filled pools along the larger lakes and marshes. Mr. Mabee submitted bred specimens from Victor July 12, 1918 (R. R. Parker).