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ON SOME HEMIPTERA FROM NORTH DAKOTA¹

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The present status of our knowledge concerning the distribution of the North American Hemiptera is very far from satisfactory. The work which has been done is sufficient to give us only a general idea of the distribution of many of the species, and there are many serious gaps which can be filled only by careful studies on the fauna of the neglected regions. This fauna will not necessarily be identical with that of the past, however. The hand of man produces changes in the character of a region; the flora and the insect fauna so intimately related to it are altered. A splendid opportunity for investigating the primitive fauna of the western United States was lost when the biological reconnaissance work of the Geological and Geographical Survey was discontinued: very few regions have received any extensive study since that time.

¹ Contribution from the Entomological Laboratory of the Bussey Institution, Harvard University, No. 203.

North Dakota is an especially favorable region for such investigations. Three distinct faunal elements meet here: the boreal is found along the northern boundary of the state; the characteristic fauna of the eastern states is well represented in a large part of eastern North Dakota; and the fauna of the Great Plains and the Rocky Mountains is found in the southwestern corner of the state. But although faunistic work was very auspiciously begun here by the early surveys, it was soon neglected, and no paper dealing with the Hemiptera of Dakota has appeared since 1878, when Uhler published his last list of Hemiptera from this region. Only a few isolated North Dakota records have been published since that time, and they are widely scattered in the literature.

In 1919 the North Dakota Biological Station in coöperation with the Museum of Zoology of the University of Michigan undertook, under the direction of Crystal Thompson, a biological survey of the state, and has continued this during succeeding summers. The continued progress of the work has been made possible through the untiring efforts and generous assistance of Dr. R. T. Young, Director of the State Biological Station. As a part of this reconnaissance, my friend T. H. Hubbell made a collection of insects in various parts of North Dakota during the summer of 1920. About seven weeks were devoted to the field work, and while Hubbell gave his attention primarily to the Orthoptera, he was able to pick up a goodly number of Hemiptera. His collection, augmented by a number of specimens taken by other collectors, has been submitted to me for determination, and forms the basis of the present paper.

Mr. Hubbell's itinerary was as follows: From July 19 to July 29 he worked in the region about Devils Lake, making short expeditions to Stump Lake (July 24 and 25) and to

Spring Lake (July 25), both of which are in Nelson County. He then went to the Turtle Mountains, where he remained from July 30 till August 6, save for two days (July 31 and August 1) which were spent at Bottineau. From the Turtle Mountains he returned to Devils Lake, and was there until August 17; during this time he made but one short trip, to the Sheyenne River in Eddy County, about three miles south of Warwick, on August 8. From August 21 to 28 he worked in the region about Amidon, in Slope County, where he spent a large part of his time in the Bad Lands west of the town. The last locality he visited was Fargo, where he obtained a number of specimens on August 31 and September 2. His collection also contains several Hemiptera taken by Ada L. Olson at the Sheyenne River (August 8), and at Buford (July 23) and Williston (July 24) in Williams County. The comparatively few specimens taken by other collectors will be noted under the respective species.

A careful search of the literature has yielded definite records from North Dakota for only 42 species, while 39 others are listed simply from "Dakota." Mr. Hubbell's collection contains about 110 species, of which 99 can be named at present. Of these, 26 have previously been reported from North Dakota, so that the total number of species now recorded from the state stands at 115. In the annotated list which follows I have incorporated all the previously published North Dakota records, together with the data from the specimens in the collection before me. Species not previously recorded from the state are marked with an asterisk.

Acknowledgments are due to several of my friends for their assistance in determining several of the species recorded here. Thus Mr. Bueno has identified the three species of Saldidae in the collection; Professor Knight has determined the Ortho-

tylinae and the Phylinae, as well as several of the other Mirid species; and Professor Parshley has named the Tingidae and a few of the other forms.

LIST OF SPECIES

SCUTELLERIDAE

Homœmus œneifrons (Say).—Specimens were taken at Devils Lake, July 25, at the Turtle Mountains, and at Fargo. One of the individuals from the Turtle Mountains has a pale vitta on either side of the head, similar in position to that found in *H. bijugis*, though somewhat narrower. Its other characters are those of *œneifrons*, and it must be referred here. This species was also recorded by Uhler (1878, p. 503) from Pembina and the Mouse River.

Eurygaster alternatus (Say).—There are six specimens in the collection. Four were taken at Devils Lake, July 25-28; one was found on the vegetation on the arid Chalky Buttes south of Amidon, August 22; and the other was taken at the edge of a wheat field at Amidon, August 24. Uhler (1878, p. 503) lists the species from Pembina, Turtle Mountains, and the Mouse River.

CYDNIDAE

**Corimelana pulicaria* (Germar).—Four individuals were found on the vegetation in an open woods by the Sheyenne River; one was taken on Ambrosia at Devils Lake, August 14; and three were collected at Fargo. Uhler (1876, p. 271; 1878, p. 503) records this species from "Dakota."

Galgupha nitiduloides (Wolff).—Van Duzee (1917, p. 14, No. 28) lists this species as occurring in North Dakota. It does not occur in Mr. Hubbell's collection.

Sehirus cinctus (Palisot de Beauvois).—This species is

recorded by Uhler (1878, p. 503) from Pembina and the Mouse River. I have not seen any North Dakota specimens.

PENTATOMIDAE

Sciocoris microphthalmus Flor.—One specimen was taken on the herbaceous growth on the rocky side of Black Butte, near Amidon, August 21. I have previously reported this specimen (1921, p. 9).

**Peribalus abbreviatus* (Uhler).—Two specimens are in the collection. One was taken at Bottineau, from herbage in a depression in a pasture; the other was found in a shrub-filled clearing at the Turtle Mountains.

**Peribalus limbolarius* Stål.—Two specimens from Amidon, both taken from vegetation in which ragweed was predominant.

**Rhytidolomia faceta* (Say).—Eight individuals were taken from a small area on the shore of Devils Lake at the Narrows, July 21, where they occurred among the sparse vegetation. Reported by Uhler (1872, p. 399) from "Dakota."

**Chlorochroa uhleri* Stål.—This species occurred commonly at Bottineau; and one individual was taken from the shore vegetation behind the mud flats at Spring Lake.

Carpocoris remotus Horváth.—One, from a tall growth of mustard grass and thistles on the prairie near Amidon, August 23. Miss Olson also took four specimens at Buford. Van Duzee (1904, p. 42) records this species from Williston, as *Carpocoris lynx*.

**Euschistus tristigmus* (Say).—Four specimens were taken. One is from Devils Lake, July 28, where it was found in the undergrowth in an oak woods, and the others are from a similar situation near the Sheyenne River.

**Euschistus euschistoides* (Van Vollenhoven).—A good series of specimens was brought from Devils Lake and from Amidon.

Coenus delius (Say).—This species is also represented by numerous specimens. It was found at Devils Lake, Stump Lake, the Turtle Mountains, and Amidon (Hubbell), and at the Sheyenne River (Olson), while Uhler (1878, p. 504) lists it from the Mouse River region.

**Neottiglossa undata* (Say).—One specimen was taken from the vegetation beside the Bois de Sioux River at Fargo.

Cosmopepla bimaculata (Thomas).—One individual from the Turtle Mountains, taken on willow in a moist meadow. Uhler (1878, p. 504) also records this species as taken near the Turtle Mountains.

Thyanta punctiventris Van Duzee.—This species is reported from Williston by Van Duzee (1904, p. 55). No species of this genus occurs in Hubbell's collection.

Perillus bioculatus claudus (Say).—Mr. N. A. Wood took one specimen of this species at Devils Lake, in May, 1921. Uhler (1878, p. 504) records it from Turtle Mountains.

**Perillus circumcinctus* Stål.—One specimen was collected at Bottineau, August 1; and a second was captured on a raspberry bush at Devils Lake, July 28, while it was feeding on a Chrysomelid larva. The species is reported from "Dakota" by Uhler (1876, p. 282).

Apateticus cynicus (Say).—Dr. Uhler (1878, p. 504) listed this species from Pembina and the Mouse River, but possibly this record may refer to the next species. *A. cynicus* was not taken by Hubbell.

**Apateticus bracteatus* (Fitch).—One individual was taken at Bottineau, from the vegetation beside a dry creek bed.

COREIDAE

**Protenor belfragei* Haglund.—The collection contains five adults and several nymphs of this species. The latter were

taken at Devils Lake in July; one adult was taken in a marshy area at the Turtle Mountains, and the other four at Devils Lake during August.

**Megalotomus quinquespinosus* (Say).—Two individuals were brought from the Turtle Mountains, and one was taken at the Sheyenne River.

*Coriscus*¹ *eurinus* (Say).—The two specimens in the collection are from Devils Lake, where they were taken July 20, running about on the sand among the sparse beach grasses. Uhler (1878, p. 504) lists this species from Pembina and Turtle Mountains.

**Coriscus conspersus* (Montandon).—Numerous specimens were taken at Devils Lake (July), as well as at Stump Lake, Spring Lake, the Sheyenne River, and the Turtle Mountains. Montandon (1893, p. 16) lists this species from "Dakota."

**Coriscus tomentosus* (Fracker).—One specimen, taken in flight at Amidon, August 23, has been placed here. Its coloration is very nearly identical with that of *C. pluto* (Uhler), as described by Fracker (1918, p. 266-68), but the antennal and genital characters are those of *tomentosus*. On the other hand, I have a specimen of *pluto* from Dilley, Oregon, given to me by Mr. Barber, which agrees exactly in color with Fracker's description of *tomentosus*. Such color variations, however, are analogous to those found in *C. conspersus* and its variety *infuscatus* (Fracker). *C. tomentosus* has previously been recorded only from Colorado.

**Coriomerus humilis* (Uhler).—One individual was taken on the arid Chalky Buttes near Amidon, August 24; and Mr. Bueno has a specimen taken at Fargo, May 26, 1900, which he has kindly permitted me to record here.

¹ Horváth has shown (1917, p. 378) that *Cimex calcaratus* Linné is the type species of both *Alydus* Fabr., 1803, and *Coriscus* Schrank, 1796. *Alydus* is therefore a strict synonym of *Coriscus*.

Parshley (1921 b, p. 3) has recently questioned the validity of this species. I have examined too few specimens to have reached any definite conclusions on this point, but I may note that I have seen two apparently distinct North American forms in this genus, quite different in habitus but very difficult to distinguish on a structural basis. I hope to publish further on this genus in the near future.

One specimen of the brachypterous form which has commonly been referred to this species, even by Uhler himself, was taken at Amidon, August 24, from goldenrod in the bottom of a gully in the "breaks" of the Bad Lands. This form cannot possibly be referred to *C. humilis*, or even to the genus *Coriomerus*, for the structure of the metathoracic orifices excludes it from the subfamily Pseudophloeinae: I have seen only brachypterous individuals, and so can give no information regarding the venation of the membrane and the alae. This insect possesses some characters in common with *Scolopocerus*, but differs from that genus in the position of the spiracles. In all probability it represents a genus still undescribed, as has been suggested to me by Mr. Barber.

Harmostes reflexulus (Say).—One specimen, from the Chalky Buttes near Amidon, August 22, is in the collection. Uhler (1878, p. 505) lists it from the Mouse River.

Corizus lateralis (Say).—Uhler (1878, p. 505) records this form from the Turtle Mountains. Neither this nor the next species was taken by Hubbell.

Corizus crassicornis (Linné).—Reported from Pembina by Uhler (1878, p. 505), under the name *C. punctiventris* Dallas.

**Leptocoris trivittatus* (Say).—Collected at Devils Lake, May 7, 1921 (N. A. Wood), and at Grand Forks (H. A. Shaw).

ARADIDAE

Aradus robustus Uhler.—Dr. Parshley (1921 a, p. 41) has recorded the single specimen taken by Hubbell at Devils Lake, July 22.

Aradus lugubris Fallen.—Recorded from Valley City by Parshley (*op. cit.*, p. 80).

NEIDIDAE

Neides muticus (Say).—Uhler lists this form from Pembina (1878, p. 504). It was not taken by Hubbell.

LYGAEIDAE

**Lygaeus kalmii* Stål.—The eastern race *angustomarginatus* Parshley was taken only at Devils Lake, together with a few specimens intermediate between this form and the typical *kalmii*. The latter was found in small numbers at Devils Lake, and commonly at Amidon (Hubbell) and at Buford (Olson). Thus it appears that the ranges of the two subspecies overlap in central North Dakota.

Nysius ericae (Schilling).—I have placed here all the specimens of this genus which were taken at Devils Lake during July. Uhler (1878, p. 505) lists this species, under the name *N. angustatus*, from Pembina and Mouse River; and it is possible that the specimens from "Dakota" that he mentions (1895, p. 22) in connection with the description of *N. minutus* should also be referred to this species.

**Nysius thymi* (Wolff).—One specimen was brought from the Turtle Mountains and six from Amidon.

**Ischnodemus folicus* (Say).—Mr. Hubbell took a single individual at Devils Lake, July 22. Uhler (1876, p. 305) lists the species from "Dakota."

Blissus leucopterus (Say).—This species is stated to occur

but rarely in North Dakota (cf. Bull. 34, N. D. Agr. Exp. Sta., 1898, p. 294). It was not taken by Hubbell.

Geocoris bullatus bullatus (Say).—Seven specimens are in the collection. Three are from Devils Lake (July 19 and August 13), two are from the Turtle Mountains (July 30, August 6), one from the Sheyenne River, and the other from the summit of Black Butte, which rises from the plains south of Amidon. Uhler (1878, p. 505) lists this species from Pembina.

**Geocoris uliginosus uliginosus* (Say).—One specimen was found in company with numerous Saldidae, on the shore of East Bay at Devils Lake, where the mud is covered with a thin saline crust from the evaporation of the strongly alkaline water. Uhler (1876) lists this form and the variety *limbatus* Stål as occurring in "Dakota."

**Sphaerobius insignis* (Uhler).—One individual was brought from the summit of Black Butte, August 21, and three were taken in the Turtle Mountains, August 6, where they were running about on the ground in a dry field.

**Zeridoneus costalis* (Van Duzee).—One specimen was taken from the vegetation beside the Bois de Sioux River at Fargo, August 31.

**Ligyrocoris diffusus* Uhler.—The collection contains three specimens from Amidon, one from the Turtle Mountains, and one from Fargo.

**Ligyrocoris sylvestris* (Linné).—Nine specimens were collected in the Turtle Mountains, July 30 to August 6.

**Peritrechus fraternus* Uhler.—Two individuals were collected from a dry pasture at Bottineau; and thirty were taken at a lighted sheet in the grassy yard of the Devils Lake Biological Station, on the very warm evening of August 8.

**Sphragisticus nebulosus* (Fallén).—The collection contains nine specimens. Three were taken from weeds at the edge of Stump Lake, four at Bottineau, one in the Turtle Mountains, and one at Devils Lake (at light, August 8). Listed from "Dakota" by Van Duzee (1917, p. 193, No. 592).

Emblethis vicarius Horváth.—Seven specimens are in the collection. Four are from the Turtle Mountains, one from the prairie at Amidon, and two from the bare sand flats beside Devils Lake. Horváth (1908, p. 563) records this species from North Dakota, but without any definite locality.

TINGIDAE

**Melanorhopala lurida* Stål.—Seven specimens were brought from Devils Lake, where they were taken from roadside vegetation in the woods on the military reservation, July 22.

**Leptoypha mutica* (Say).—One of the two individuals in the collection was taken with the preceding species, July 22, and the other was found in a similar situation near Devils Lake, July 28.

**Corythucha marmorata* Uhler.—The two examples of the typical form were taken at Devils Lake, July 22, from the same locality as the two preceding species. Four specimens of the variety *informis* Parshley were collected in the Turtle Mountains, in a field covered with goldenrod and other Compositae.

**Corythucha cydonia* Fitch.—Of the ten specimens from Devils Lake, nine were taken from undergrowth in an oak woods on July 22, while the other, according to Hubbell's notes, was found on choke cherry, August 13. In Michigan I have taken this species only on *Amelanchier canadensis*.

**Corythucha arcuata* (Say).—The four specimens from Devils Lake were taken on July 22 from the same locality as

the preceding species, while a fifth individual was found in a similar situation near the Sheyenne River, August 8.

PHYMATIDAE

Phymata erosa fasciata (Gray).—Twenty-seven specimens are in the collection. Ten of these were taken at Amidon while the remainder are from Devils Lake, Fargo, and Bottineau (Hubbell), and from the Sheyenne River (Olson). Uhler (1878, p. 507) lists this species from Pembina and the Mouse River.

REDUVIIDAE

Rhynocoris ventralis (Say).—Recorded by Uhler (1878, p. 508) from Pembina. It was not taken by Hubbell.

Sinea diadema (Fabricius).—Represented by thirty-seven specimens, of which twenty-two were taken on August 12 from a dense growth of tall weeds on the flats by Devils Lake. Mr. Hubbell writes, "The . . . Reduviid is extremely abundant everywhere in this region, in similar locations." Other specimens were collected at Devils Lake, Stump Lake, Fargo, and Amidon; while Uhler (1878, p. 508) lists the species from Turtle Mountains.

NABIDAE

Nabis subcoleopratus (Kirby).—Specimens were secured at Devils Lake, Stump Lake, Spring Lake, Sheyenne River, and Amidon. Uhler (*loc. cit.*) lists the species from Pembina and Turtle Mountains.

**Nabis propinquus* Reuter.—Three apterous individuals were taken at Devils Lake, July 22 and 25; and one example of the very rare macropterous form was found there on August 15.

Nabis ferus (Linné).—This species was taken by Hubbell

at Devils Lake, the Turtle Mountains, and Amidon, and by Miss Olson at Williston. Uhler (1878, p. 508) records it from Pembina and the Mouse River region.

**Nabis rufusculus* Reuter.—Six individuals were secured at Devils Lake, August 13, from undergrowth in a moist wood of elm and box elder, and from grasses in the clearings.

ANTHOCORIDAE

**Triphleps insidiosus tricolor* White.—One of the two specimens at hand is from the Turtle Mountains, the other from Spring Lake.

MIRIDAE

Stenodema vicinum (Provancher).—Reported from Pembina by Uhler (1878, p. 506), under the name *Miris instabilis* Uhler.

**Stenodema trispinosum* Reuter.—Taken at light near the Devils Lake Biological Station, August 8.

**Megaloceraea debilis* Uhler.—Two individuals were found on the roadside vegetation at the Odessa Narrows on Devils Lake, July 23; and one was found in the grass in a dry creek bed at Bottineau, August 1.

Trigonotylus ruficornis (Fallén).—One specimen was taken in the Turtle Mountains, August 6; and a second came to light at Devils Lake, August 8. Uhler (1878, p. 506) lists the species from Pembina.

**Trigonotylus tarsalis* (Reuter).—Three specimens were secured at Devils Lake, July 19 and 25.

**Platytylellus circumcinctus* (Say).—Three individuals were brought from the Turtle Mountains, where they were beaten from undergrowth in a second-growth aspen woods, August 4. (Determined by Knight.)

**Platytyrellus nigricollis* (Reuter), var.—Several specimens were taken with the preceding species, and others were taken in the Turtle Mountains, at Bottineau, and at Devils Lake. (Determined by Knight.)

Platytyrellus insignis (Say).—Reported by Uhler (1878, p. 507) from the Turtle Mountains. This species is not in Hubbell's collection.

**Phytocoris lasiomerus* Reuter.—Three examples were taken in the Turtle Mountains, both from willows and from other vegetation in a moist meadow. A mutilated specimen from Devils Lake (August 7) appears to belong here.

**Phytocoris salicis* Knight.—Taken on willow in the Turtle Mountains, August 2. Also found on the undergrowth in the various types of woodland at Devils Lake. (Determination verified by Knight.)

**Phytocoris lacunosus* Knight.—Taken on willow in a moist meadow at the Turtle Mountains, August 4. Dr. Knight writes me that these are the first specimens he has seen other than the types, which were taken on *Carpinus caroliniana* at McLean, N. Y.

Adelphocoris rapidus (Say).—Five typical specimens from Fargo are at hand, while one specimen from Devils Lake tends toward *superbus*. Recorded from the Turtle Mountains by Uhler (1878, p. 506).

**Adelphocoris ?superbus* (Uhler).—I have placed here three specimens from the Turtle Mountains and one from Amidon. I am unable to separate this species from the preceding on any structural basis, and am of the opinion that *superbus* constitutes a western form of *rapidus*.

Paciloscytus unifasciatus (Fabricius).—Taken from the vegetation beside a moist meadow at the Turtle Mountains,

August 6. (Determined by Knight.) Uhler (1878, p. 507) also recorded this species from the Turtle Mountains.

**Pæciloscytus venaticus* Uhler.—Taken in Sully's Hill National Park, near Devils Lake, July 19. A variety of this species was taken on sedges in the Turtle Mountains, July 30. (Determined by Knight.)

Pæcilocapsus lineatus (Fabricius).—Listed by Uhler (1878, p. 506) from Pembina. Neither this species nor the next one was taken by Hubbell.

Horcias dislocatus goniphorus (Say).—Recorded from Pembina by Uhler (*loc. cit.*), as "the red variety of *Lygus dislocatus*."

**Lygidea rubecula* (Uhler).—Nine specimens were beaten from willow in a moist meadow at the Turtle Mountains, August 4. Four of these belong to the variety *obscura* Reuter, and the remainder to one of the paler forms.

Lygus pratensis (Linné).—A long series of specimens is at hand from Devils Lake, Stump Lake, Bottineau, Turtle Mountains, Fargo, and Amidon (Hubbell), and from Buford and Williston (Olson). Uhler (1878, p. 506) records this species from Mouse River, under the name *L. lineolaris*.

Nearly half of the specimens can be referred to the variety *oblincatus* (Say), while only two belong to the variety *strigulatus* (Walker): these specimens were all taken in the eastern part of the state and in the Turtle Mountains. The specimens from western North Dakota, as well as a number of those taken at Devils Lake and in the Turtle Mountains, belong to an unnamed variety which is characterized by the very pale-green coloration, the extreme reduction of the dark markings, and the semi-hyaline hemelytra: the markings of the hemelytra are commonly reduced to a pair of very small geminate dark

spots near the apex of the corium, and a dark spot on the tip of the clavus, much as in *L. elisus*.

**Lygus vanduzeei* Knight.—One individual was secured at the Turtle Mountains, and two at Fargo.

**Lygus plagiatus* Uhler.—A few specimens were taken from the vegetation by the Bois de Sioux River at Fargo; and nine specimens were collected from ragweed at the edge of a woods by Stump Lake.

**Lygus campestris* Linné.—Several specimens were brought from the Turtle Mountains, where they were swept from the herbaceous plants in the fields. (Determined by Knight.)

Lygus invitus (Say).—Uhler (1878, p. 505) records the capture of this species in the Turtle Mountains, July 24, 1873. This record requires confirmation, as the *Lygus invitus* of Uhler included several additional species as now distinguished.

**Neoborus amœnus amœnus* (Reuter).—Three individuals were taken from roadside vegetation in a moist woods by the Sheyenne River, August 8. As is the case in Michigan specimens collected at this season, these have not acquired their permanent definitive coloration, but still have the dark areas of the mature form bright red in color.

**Deræocoris fasciolus* Knight.—Two specimens were secured in the Turtle Mountains, one from roadside vegetation consisting chiefly of *Corylus rostrata* and various seedlings, the other from the plants by the shore of Lake Upsilon. (Determined by Knight.)

**Deræocoris nitenatus* Knight.—One male was taken at Devils Lake, July 23, from undergrowth in a grove of elm and box elder.

Deræocoris aphidiphagus Knight.—Professor Knight (1921, p. 135) records a specimen taken in Kidder County, July 14, by A. A. Nichol. This species is not in Hubbell's collection.

**Deracocoris histrio* (Reuter).—One individual came to the light at Devils Lake, August 8.

**Orectoderus obliquus* Uhler.—Two of the myrmeciform females of this species were collected at Devils Lake, July 19 and 23. (Determined by Knight.)

**Coquilletia insignis* Uhler.—Several individuals of both sexes were brought from Amidon. The majority of them were found on the buttes south of the town. (Determination verified by Knight.) Uhler (1890, p. 79) listed the species from "Dakota."

**Hyaliodes vitripennis* (Say).—Five specimens from the Turtle Mountains, August 4, swept from undergrowth in a thick stand of second-growth aspens and balsam poplars.

**Strongylocoris stygicus* (Say).—A good series of specimens was secured at Bottineau, the Turtle Mountains, and Devils Lake. Uhler (1878, p. 507) records the species from Pembina.

**Pilophorus clavatus* (Linné).—One specimen was taken from the grasses in a dry creek bed at Bottineau, August 1. (Determined by Knight.)

**Ceratocapsus pumilus* (Uhler).—A number of specimens were collected at Devils Lake. Most of these came to the light during the warm evenings in early August; and the remainder were swept from low shrubbery and undergrowth in the woods. (Determined by Knight.)

**Lopidea instabilis* (Reuter).—Taken at Amidon on rose bushes, at Devils Lake on *Fraxinus*, and at the Sheyenne River. (Determined by Knight.)

**Lopidea media* (Say).—Miss Olson took two females of this species at Williston, July 24. (Determined by Knight.)

Uhler (1878, p. 506) listed this species from the Mouse River, but this record may not refer to *L. media* as now understood.

Lopidea spp.—The collection contains specimens of two undescribed species of this genus. One of these forms was taken only in the Turtle Mountains, the other at the Turtle Mountains and at Devils Lake.

**Diaphnoidia pellucida* Uhler.—Taken from undergrowth in a stand of elm and box elder at Devils Lake, July 28; and from the low vegetation in a stand of second-growth aspen in the Turtle Mountains, August 4. (Determined by Knight.)

Reuteria irrorata (Say).—Uhler (1878, p. 507) reports this species from Pembina and the Turtle Mountains. It does not occur in Hubbell's collection.

**Orthotylus flavosparsus* (J. Sahlberg).—Taken at Devils Lake, Stump Lake, and Fargo. (Determined by Knight.)

**Orthotylus coagulatus* (Uhler).—Specimens were secured at the Turtle Mountains, at Devils Lake (at light), and at Amidon (on thistle).

**Orthotylus fumatus* Van Duzee.—Two specimens were brought from Devils Lake. Both were taken at the light, August 8 and August 15. (Determined by Knight.)

**Ilacora stålhi* Reuter.—Represented by specimens from Devils Lake, Bottineau, the Turtle Mountains, and the Sheyenne River.

**Plagiognathus obscurus* Uhler, var.—A good series of specimens was brought from Devils Lake, Stump Lake, Fargo, Bottineau, and the Turtle Mountains. (Determined by Knight.)

**Plagiognathus guttatipes* (Uhler).—Several individuals were taken at Devils Lake, July 19-25. Dr. Uhler described this species as a Lygus, and it is so listed in Van Duzee's

Catalogue. Dr. Knight writes me that these are the first specimens he has seen which have been taken in any locality outside of Colorado.

Plagiognathus spp.—Two other species of this genus appear to be represented by a single specimen each. One is from Fargo, the other from the Turtle Mountains.

**Chlamydatus associatus* (Uhler).—Specimens were taken at Amidon and at Fargo. (Determined by Knight.)

GERRIDAE

**Gerris marginatus* Say.—Five specimens were collected on the Sheyenne River near Warwick, August 8.

**Gerris buenoi* Kirkaldy.—Five individuals were taken with the preceding, and eleven were secured from a small fresh-water pond near Stump Lake.

Limnoporus rufoscutellatus (Latreille).—The collection contains nine individuals, taken on a small spring-fed brook near Stump Lake. Uhler (1878, p. 508) reports this species from Pembina.

MESOVELIADAE

**Mesovelia mulsanti* White.—Three specimens are at hand. One was taken on a small pasture pond near Devils Lake, July 20, and the others were found at Stump Lake, July 24.

SALDIDAE

**Salda coriacea* Uhler.—The collection contains ten specimens of this species. Seven are from Odessa Narrows at Devils Lake, where they occurred on the margin of a small pond. One was taken at Stump Lake, from marshy ground by a brook. One was found in a slough in the Turtle Mountains; and the tenth is from the Sheyenne River.

**Pentacora signoreti* (Guérin).—Common on the mud flats about Spring Lake, where the soft muck is encrusted with alkali salts.

**Saldula interstitialis* (Say).—A good series was collected on the muddy margin of a pasture pond at Devils Lake, July 20. Other specimens were taken at Devils Lake (at light), at Odessa Narrows, and on the shore of Lake Upsilon in the Turtle Mountains. Uhler (1877, p. 444) records this species from "Dakota."

NOTONECTIDAE

**Notonecta undulata* Say.—This species was taken at Odessa Narrows on Devils Lake, at Lake Upsilon in the Turtle Mountains, and at Stump Lake. The specimen from Stump Lake lacks head and prothorax, but is readily identified by the form of the gonapophyses.

BELOSTOMATIDAE

**Lethocerus americanus* (Leidy).—Crystal Thompson took an adult, a nymph, and an egg-mass of this species in Fort Totten Lake during July, 1919. Mr. A. H. Eastgate kindly gave Hubbell two other adults, which were collected under street-lights in Fargo by H. A. Shaw in August, 1892.

**Belostoma flumineum* Say.—Hubbell took two adults from the Bois de Sioux River near Fargo, September 2. One of these individuals was seen to fly over the river and to drop into shallow water near the shore.

CORIXIDÆ

Cymatia americana Hussey.—A number of the paratypes of this species were taken by Crystal Thompson while making plankton collections in Fort Totten Lake, August 7, 1919. They have already been recorded elsewhere (Hussey, 1920, p. 80).

Arctocorisa spp. Several species of this genus were taken at Devils Lake and in the Turtle Mountains. They had best be left unnamed at present.

Corixa spp. The remarks in connection with the preceding genus may be applied here also.

The following species, not mentioned above, are recorded from "Dakota" in the literature, but I have not found any records for them from definite localities in North Dakota. Many or all of them may be expected to occur within the state.

Homaemus bijugis Uhl.—Uhler, 1876, p. 272.

Corimelaena extensa Uhl.—Uhler, 1872, p. 193; 1876, p. 271.

Mormidea lugens (Fabr.).—Uhler, 1876, p. 285.

Euschistus servus (Say).—Uhler, 1876, p. 286. This record requires confirmation.

Hymenarcys nervosa (Say).—Uhler, 1876, p. 287.

Hymenarcys aequalis (Say).—Van Duzee, 1917, p. 46. I have been unable to find any other Dakota record.

Aelia americana Dall.—Uhler, 1876, p. 284.

Neottiglossa trilineata Kirby.—Uhler, 1877, p. 401.

Thyanta custator (Fabr.).—Uhler, 1876, p. 290.

Thyanta rugulosa (Say).—Uhler, 1876, p. 290.

Banasa dimidiata (Say).—Van Duzee, 1904, p. 60.

Perillus exaptus (Say).—Uhler, 1876, p. 281.

Podisus modestus Dall.—Uhler, 1876, p. 283.

Catorhintha mendica Stål.—Uhler, 1876, p. 292.

Stachiocnemus apicalis (Dall.).—Uhler, 1877, p. 402.

Aufeius impressicollis Stål.—Uhler, 1876, p. 300.

Corizus hyalinus (Fabr.).—Uhler, 1876, p. 300.

Corizus viridicatus Uhler.—Uhler, 1877, p. 404; Horváth, 1908, p. 566.

Lygaeus reclinatus Say.—Uhler, 1876, p. 302. The Dakota records for this species and the next should be confirmed.

Nysius californicus Stål.—Uhler, 1872, p. 406; 1876, p. 304.

Zelus socius (Uhl).—Uhler, 1872, p. 420; 1876, p. 328.

Nabis inscriptus (Kirby).—Uhler, 1876, p. 325. This record requires verification.

Miris amoenus (Uhl).—Uhler, 1872, p. 409; 1876, p. 316.

Deraeocoris nebulosus (Uhl).—Uhler, 1876, p. 319.

Dacota hesperia Uhl.—Uhler, 1872, p. 413; 1876, p. 318.

Dicyphus vestitus Uhl.—Uhler, 1895, p. 46.

Hadronema picta Uhl.—Uhler, 1895, p. 31.

Saldula major (Prov.).—Uhler, 1877, p. 443, as *Salda deplanata*.

Notonecta insulata Kirby.—Van Duzee, 1917, p. 453, No. 1357.

LIST OF REFERENCES CITED

- FRACKER, S. B., 1918. The Alydinae of the United States. *Ann. Ent. Soc. Amer.*, xi, pp. 255-282.
- HORVATH, G., 1908. Remarques sur quelques Hémiptères de l'Amérique du Nord. *Ann. Mus. Nat. Hung.*, vi, pp. 555-559.
- , 1917. Heteroptera palaeartica nova vel minus cognita. I. *Ann. Mus. Nat. Hung.*, xv, pp. 365-381.
- HUSSEY, R. F., 1920. An American Species of Cymatia. *Bull. Brookl. Ent. Soc.*, xv, pp. 80-83.
- , 1921. Distributional Notes on Hemiptera, with the Description of a new Gerris. *Psyche*, xxviii, pp. 8-15.
- KNIGHT, H. H., 1921. Monograph of the North American Species of *Deræocoris*. 18th Rept. Minn. State Entomol., pp. 77-210 (= *Techn. Bull. No. 1*, Univ. Minn. Agr. Exp. Sta., pp. 77-210).
- MONTANDON, A. L., 1893. Notes on American Hemiptera-Heteroptera. *Proc. U. S. Natl. Mus.*, xvi, pp. 45-52.
- PARSHLEY, H. M., 1921 a. Essay on the American Species of *Aradus*. *Trans. Amer. Ent. Soc.*, xlvii, pp. 1-106.
- , 1921 b. Report on some Hemiptera from British Columbia. *Proc. Brit. Col. Ent. Soc.*, No. 18, pp. 13-24.
- UHLER, P. R., 1872. Notices of the Hemiptera from the Western Territories of the United States, chiefly from the Surveys of Dr. F. V. Hayden. *Hayden Surv. Terr.*, Rept. for 1871, pp. 392-423.
- , 1876. List of the Hemiptera of the Region West of the Mississippi River, including those collected during the Hayden Explorations of 1873. *Bull. U. S. Geol. Geogr. Surv.*, i, pp. 269-364.
- , 1877. Report upon the Insects Collected by P. R. Uhler during the Explorations of 1875, including Monographs of the Cydnidae and Saldæ, and the Hemiptera collected by A. S. Packard, Jr., M. D. *Bull. U. S. Geol. Geogr. Surv.*, iii, pp. 355-475.
- , 1878. On the Hemiptera collected by Dr. Elliott Coues, U. S. A., in Dakota and Montana during 1873-1874. *Bull. U. S. Geol. Geogr. Surv.*, iv, pp. 503-512.
- , 1890. Observations on North American Capsidae, with Descriptions of New Species. (No. 5.) *Trans. Md. Acad. Sci.*, i, pp. 73-88.
- , 1895. *In*: Gillette and Baker, A Preliminary List of the Hemiptera of Colorado. *Colo. Agr. Exp. Sta.*, Bull. 31.
- VAN DUZEE, E. P., 1917. Catalogue of the Hemiptera of America North of Mexico. *Univ. Calif. Publs., Techn. Bull., Ent.*, vol. ii.

