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Report on a Collection of Spiders from the Coast of North Carolina

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The spider fauna of North Carolina has received only modest attention from systematists. In 1938 Brimley published (as part of his "Insects of North Carolina," North Carolina Department of Agriculture, Raleigh, pp. 467-485) a list of the spiders of the state. This list, with its supplements, was necessarily based on the scattered records in the literature and is manifestly incomplete and already out of date. The inattention of arachnologists to this portion of the southeast is particularly unfortunate because of its intermediate geographical position between the north and south. Undoubtedly, as the fauna of North Carolina and Virginia becomes better known, the distribution pattern of many of the more northern and southern species of spiders in the eastern United States will become more distinct.

The present paper is concerned with a collection of spiders taken during the period from 1950 through 1952 from a coastal area in Carteret County 70 miles south of Cape Hatteras. The topography of this region is characterized by many sounds, bays, and estuaries, resulting in large expanses of salt marsh and dune vegetation as well as maritime shrub and forest complexes. It seems very likely that this coastal strip of North Carolina and probably Virginia marks the northernmost extension of the distribution of many southern spiders. Many of the 154 species collected from these maritime communities have been previously reported only from Florida and other portions of the extreme south. In this paper only the records of greatest interest are noted.

The author wishes to thank Dr. W. J. Gertsch of the American Museum of Natural History for his assistance with numerous taxonomic problems involved in this paper and also the Duke University Marine Laboratory for the many facilities extended to the author during the three years in which collections were made on the coast of the state.

Types of new species and all other specimens reported are deposited in the collections of the American Museum of Natural History. All specimens were collected by the author unless otherwise indicated. •

SUBORDER MYGALOMORPHAE

ATYPIDAE

Atypus bicolor Lucas

Atypus bicolor LUCAS, 1836, Ann. Soc. Ent. France, vol. 5, p. 213, pl. 5, fig. 5.

RECORDS: Carteret County: Beaufort, one male, June 11, 1952.

CTENIZIDAE

Pachylomerides audouini (Lucas)

Pachyloscelis audouinii LUCAS, 1836, Mag. de Zool., vol. 8, p. 5.

RECORDS: Carteret County: Beaufort, one male, September 17, 1951.

SUBORDER ARANEOMORPHAE

OONOPIDAE

Stenoonops minutus Chamberlin and Ivie

Stenoonops minutus CHAMBERLIN AND IVIE, 1935, Bull. Univ. Utah, vol. 26, no. 4, p. 8, pl. 1, figs. 1, 2, pl. 2, fig. 14.

RECORDS: Carteret County: Atlantic Beach, one male, October 15, 1951.

PHOLCIDAE

Psilochorus pullulus (Hentz)

Theridion pullulus HENTZ, 1850, Jour. Boston Soc. Nat. Hist., vol. 6, p. 282, pl. 10, fig. 5.

RECORDS: Carteret County: Shackleford Banks, one female, July 15, 1950; Fort Macon Beach, one male, June 30, 1952, beneath driftwood.

Spermophora meridionalis Hentz

Spermophora meridionalis HENTZ, 1841, Amer. Jour. Sci., vol. 41, p. 117.

RECORDS: Carteret County: Beaufort, one female, May 30, 1951.

THERIDIIDAE

Allotheridion australe (Banks)

Theridion australe BANKS, 1899, Proc. Ent. Soc. Washington, vol. 4, p. 191.

RECORDS: Carteret County: Beaufort, two females, September 17, 1951, shaken from dune grass.

Allotheridion chinda (Chamberlin and Ivie)

Theridion chinda CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, vol. 35, no. 9, p. 49, figs. 82-84.

RECORDS: Carteret County: Beaufort, three females, August 24, 1951, beaten from maritime shrubs.

Allotheridion dividuum (Gertsch and Archer)

Theridion dividuum GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 6, fig. 29.

RECORDS: Carteret County: near Beaufort, one female, July 13, 1951, swept from salt marsh.

Allotheridion murarium (Emerton)

Theridion murarium EMERTON, 1882, Trans. Connecticut Acad. Arts Sci., vol. 6, p. 11, pl. 1, figs. 5-5b.

RECORDS: Carteret County: near Beaufort, one male, June 5, 1951; three females and one male, July 27, 1951.

This is one of the most abundant and characteristic spiders of maritime shrubs. Mature males and females appear in May and are found through August; the large number of immatures always present would indicate that breeding takes place continually during this period.

Coleosoma normale Bryant

Coleosoma normale BRYANT, 1944, Psyche, vol. 51, nos. 1-2, p. 56, pl. 1, figs. 2, 5, 8, 10.

RECORDS: Carteret County: Beaufort, four females, July 12, 1951; Atlantic Beach, one male, September 16, 1951; three females, November 17, 1951, shaken from dune grass.

Dipoena lineatipes Bryant

Dipoena lineatipes BRYANT, 1933, Bull. Mus. Comp. Zool., vol. 74, no. 6, p. 174, pl. 1, fig. 7.

RECORDS: Carteret County: Lennox Point near Beaufort, one male, August 31, 1951.

Paidisca marxi (Crosby)

Histagonia marxi CROSBY, 1906, Canadian Ent., vol. 38, p. 309, figs. 35-36.

Paidisca marxi (Crosby), BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 179, pl. 22, figs. 23-27.

RECORDS: Carteret County: Beaufort, one female, May 18, 1952, shaken from dune grass.

Theridula sphaerula (Hentz)

Theridion sphaerulum HENTZ, 1850, Jour. Boston Soc. Nat. Hist., vol. 6, p. 279, pl. 9, fig. 22.

RECORDS: Carteret County: North River near Beaufort, one female, May 19, 1952, swept from a salt marsh.

Tholocco pallida (Emerton)

Dipoena pallida EMERTON, 1913, Trans. Connecticut Acad. Arts Sci., vol. 18, p. 213, pl. 1, figs. 4-4c.

RECORDS: Carteret County: Shackleford Banks, one female, August 14, 1950; North River near Beaufort, one male, July 13, 1951.

LINYPHTIDAE

Meioneta beaufortensis, new species

Figures 1, 2

MALE: Total length, 1.37 mm. Carapace, 0.62 mm. long, 0.45 mm. wide. Sternum, 0.40 mm. long, 0.32 mm. wide. Abdomen, 0.75 mm. long.

	I	II	III	IV
Femur	0.62 mm.	0.60 mm.	0.45 mm.	0.57 mm.
Patella	0.10	0.10	0.10	0.15
Tibia	0.65	0.52	0.37	0.57
Metatarsus	0.52	0.47	0.37	0.50
Tarsus	0.45	0.40	0.27	0.37
Total	2.34 mm.	2.09 mm.	1.56 mm.	2.16 mm.

COLOR: Carapace straw colored, with fine dusky radiating lines. Eyes narrowly ringed with black and with dusky markings between them. Chelicerae, labium, endites, and legs straw yellow. Sternum dusky, paler in center. Abdomen dirty white, with a pale area in center of dorsum and a small white spot above spinnerets. Venter with a central pale area.

STRUCTURE: Anterior eye row straight. Anterior median eyes smaller than laterals and separated from laterals and each other by slightly less than a radius. Posterior eye row straight, eyes subequal and equidistant. Lateral eyes of each side contiguous. Median ocular area as long as wide, wider posteriorly than anteriorly (9/7). Clypeus twice the diameter of an anterior median eye. Head highest at posterior eye row, dipping slightly to middle of thorax and then gently sloping to posterior margin. Sternum as wide as long and rounded posteriorly in front of posterior coxae. Cymbium of palpal organ angulate. Details as figured.

FEMALE: Total length, 1.42 mm. Carapace, 0.55 mm. long, 0.42 mm. wide. Sternum, 0.35 mm. long, 0.30 mm. wide. Abdomen, 0.75 mm. long.

	I	II	III	IV
Femur	0.65 mm.	0.50 mm.	0.45 mm.	0.50 mm.
Patella	0.15	0.15	0.12	0.15
Tibia	—	0.50	0.32	0.52
Metatarsus	—	0.40	0.35	0.42
Tarsus	—	0.35	0.30	0.35
Total	—	1.90 mm.	1.54 mm.	1.94 mm.

Color and structure as in male. Epigynum as figured.

TYPE LOCALITY: Male holotype and two male paratypes from Carrot Island between Horse Island and Taylor's Creek Channel, Beaufort, Carteret County, North Carolina, taken June 16, 1952. Female allotype and a male paratype taken June 11, 1952, from same locality.

OTHER RECORDS: Carteret County: Atlantic Beach, one male and one female, June 8, 1952.

This species is very close to *Meioneta leucophora* Chamberlin and Ivie, but the cymbium of the palpal organ is more angulate, and it differs in the details of the bulb.

Meioneta grayi, new species

Figures 3, 4

MALE: Total length, 1.80 mm. Carapace, 0.95 mm. long, 0.57 mm. wide. Sternum, 0.50 mm. long, 0.40 mm. wide. Abdomen, 0.80 mm. long.

	I	II	III	IV
Femur	1.15 mm.	0.90 mm.	0.57 mm.	0.87 mm.
Patella	0.17	0.17	0.17	0.20
Tibia	1.17	0.82	0.42	0.67
Metatarsus	1.10	0.75	0.50	0.67
Tarsus	0.67	0.55	0.37	0.45
Total	4.26 mm.	3.19 mm.	2.03 mm.	2.86 mm.

COLOR: Carapace shining orange-brown, with dusky shading on sides. Eyes ringed with black. Chelicerae, endites, and sternum orange-brown. Legs yellow. Ground color of abdomen white; dorsum circled by a black basal band which extends posteriorly to the spinnerets. Four pair of dorsolateral maculations extend from posterior half of dorsum to join the basal band. Spinnerets encircled by black dorsally. Venter white, with a transverse black line behind genital furrow. A large black spot in middle of posterior two-thirds of venter connected on each side to the encircling black band of the dorsum by a lateral extension.

STRUCTURE: Anterior eye row straight. Anterior median eyes separated by a radius and closer to each other than to the larger anterior lateral eyes. Posterior eye row slightly procurved and eyes equal. Median separated by a radius and closer to each other than to the posterior lateral eyes. Median ocular area slightly longer than wide (19/17) and wider posteriorly than anteriorly (17/14). Height of clypeus three times the diameter of an anterior median eye. Carapace highest at level of posterior eye row and sloping imperceptibly to posterior margin. A concave depression at thoracic furrow. Carapace oval, longer than wide and rather narrow posteriorly. Sides evenly curved, with widest point just anterior to middle. Chelicerae well developed, with the upper anterior lateral margin blade-like and bearing seven downward-pointing teeth. Labium small and met by a short truncate anterior process from the sternum. Sternum longer than wide and ending in a short point separating posterior coxae. Legs very long and slender. Order of length: 1:4:2:3. Cymbium of palpal organ not angulate. Details as figured.

TYPE LOCALITY: Male holotype from Carrot Island between Horse Island and Taylor's Creek Channel, Beaufort, Carteret County, North Carolina, taken July 15, 1951.

This *Meioneta* deviates widely from the typical members of the genus. The legs and carapace are more elongate and the palpal organ is somewhat aberrant.

This species is named in honor of Dr. I. E. Gray, Chairman of the Zoology Department of Duke University.

Tennesseellum formicum (Emerton)

Bathyphantes formica EMERTON, 1882, Trans. Connecticut Acad. Arts Sci., vol. 6, p. 71, pl. 22, figs. 7-7b.

Prosothea transversa CROSBY, 1905, Proc. Acad. Nat. Sci. Philadelphia, p. 333, pl. 29, fig. 5.

Tennesseellum minutum PETRUNKEVITCH, 1925, Jour. New York Ent. Soc., vol. 33, p. 173, pl. 8, fig. 5.

Meioneta formica (Emerton), CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, vol. 35, no. 9, p. 85.

RECORDS: Carteret County: Beaufort, one female, June 7, 1951; one male, July 31, 1951, common under dry beach drift.

MICRYPHANTIDAE

Ceraticelus anomalus Gertsch

Figure 9

Ceraticelus anomalus GERTSCH, 1936, Amer. Mus. Novitates, no. 858, p. 14, figs. 14, 15.

FEMALE: Total length, 1.25 mm. Carapace, 0.62 mm. long, 0.50 mm. wide. Sternum, 0.32 mm. long, 0.32 mm. wide. Abdomen, 0.67 mm. long.

COLOR: Eyes ringed with black; carapace orange-brown; legs yellow. Abdomen pale gray covered with short hairs.

STRUCTURE: Anterior eye row recurved. Medians subcontiguous and separated from anterior laterals by a diameter. Posterior eye row procurved and eyes equal. Medians separated by slightly more than a diameter and slightly closer to posterior laterals. Median ocular area as wide as long. Wider posteriorly than anteriorly (19/13). Head slightly less protuberant than in male. Abdomen globose, dorsal scutum absent, inframammillary scutum faint, epigastric scutum present. Epigynum as figured.

RECORDS: Carteret County: Shackleford Banks, one male, July 30, 1950; Beaufort, one male and one female, August 13, 1951; Atlantic Beach, one female, September 16, 1952.

Ceratinopsis anglicana (Hentz)

Theridion anglicanum HENTZ, 1850, Jour. Boston Soc. Nat. Hist., vol. 6, p. 275, pl. 9, fig. 6.

Ceratinopsis anglicana (Hentz), BISHOP AND CROSBY, 1930, Jour. New York Ent. Soc., vol. 38, p. 15, figs. 1-4.

RECORDS: Carteret County: near Atlantic, one male, June 21, 1952, swept from a savanna.

Ceratinopsis swanea Chamberlin and Ivie

Ceratinopsis swanea CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, vol. 35, no. 9, p. 66, figs. 117, 127, 128.

RECORDS: Carteret County: Beaufort, one female, May 30, 1951.

Eperigone albula Zorsch and Crosby

Eperigone albula ZORSCH AND CROSBY, 1934, Ent. News, vol. 45, p. 245, fig. 1.

RECORDS: Carteret County: Beaufort, two males and three females, October 14, 1951; three males and four females, January 25, 1952.

This little *Eperigone* is very abundant in the litter beneath maritime shrubs.

Eperigone banksi Ivie and Barrows

Eperigone banksi IVIE AND BARROWS, 1935, Bull. Univ. Utah, vol. 26, no. 6, p. 12, pl. 3, figs. 20-24.

RECORDS: Carteret County: Shackleford Banks, one female, July 20, 1950; Beaufort, four females, January 25, 1952.

This species is commonly found beneath dry beach drift.

Grammonota gallinoides, new species

Figures 5-8

MALE: Total length, 2.05 mm. Carapace, 1.02 mm. long, 0.75 mm. wide. Height of head, 0.45 mm. Sternum, 0.52 mm. long, 0.50 mm. wide. Abdomen, 1.07 mm. long.

	I	II	III	IV
Femur	0.75 mm.	0.70 mm.	0.60 mm.	0.77 mm.
Patella	0.25	0.20	0.22	0.25
Tibia	0.55	0.65	0.45	0.67
Metatarsus	0.50	0.57	0.52	0.67
Tarsus	0.37	0.40	0.22	0.42
Total	2.42 mm.	2.52 mm.	2.01 mm.	2.78 mm.

COLOR: Carapace orange, with a dusky marginal line; head slightly darker. Thoracic groove and radiating lines dusky. Eyes surrounded with black. Sternum yellow, with a dusky border. Coxae and legs pale yellow to white. Dorsum of abdomen pale, with a short median longitudinal dark line beginning one-third of the distance from anterior end and continuing to posterior third of abdomen; crossed posteriorly by two short transverse bars. Behind median longitudinal line are three non-connected transverse bars. Spinnerets surrounded dorsally by a dark ring which does not connect ventrally but extends a short distance anteriorly along the lateral margins of venter.

STRUCTURE: All eyes subequal. Anterior eye row slightly recurved. Anterior median eyes separated by a radius and slightly closer to each other than to anterior laterals. Anterior and posterior laterals contiguous. Posterior eye row strongly procurved. Posterior median eyes located on sides of head tubercle and separated by twice their diameter. Median ocular area longer than wide (8/9) and much wider posteriorly than

anteriorly (8/5). Head and thorax rather wide. Clypeus high and slightly convex, twice the diameter of an anterior median eye. Head projected dorsally to form a blunt cone, on each side of which are the posterior median eyes. Anterior incline of head from posterior median eyes straight. Posterior declivity is short and abrupt to level of thorax which gently curves to posterior margin of carapace. Posterior head declivity with a tuft of forward-curving hairs. Sternum convex, wide anteriorly, narrowing posteriorly to extend as a narrow tongue between the last pair of coxae. Pro-fang furrow with six small teeth bordered in front by a row of short hairs. Retro-fang margin with five denticles. Middle of posterior lateral margin of chelicerae with a blunt tubercle. Tibial apophysis of palpal organ with a wide blunt tooth. Details as figured.

FEMALE: Total length, 2.75 mm. Carapace, 1.20 mm. long, 0.85 mm. wide. Height of head, 0.40 mm. Sternum, 0.65 mm. long, 0.55 mm. wide. Abdomen, 1.75 mm. long.

	I	II	III	IV
Femur	0.87 mm.	0.82 mm.	0.75 mm.	0.92 mm.
Patella	0.30	0.30	0.30	0.30
Tibia	0.70	0.67	0.57	0.77
Metatarsus	0.65	0.65	0.60	0.82
Tarsus	0.45	0.45	0.37	0.47
Total	2.97 mm.	2.89 mm.	2.59 mm.	3.28 mm.

COLOR: As in male but dorsal abdominal pattern obscured by gravid condition.

STRUCTURE: Anterior eye row recurved slightly. Anterior median eyes separated by less than a radius and closer to each other than to the larger anterior lateral eyes. Lateral eyes contiguous. Posterior eye row moderately procurved. Posterior medians separated by slightly more than a radius. Median ocular area longer than wide (17/13) and wider posteriorly than anteriorly (13/10). Head normal. Clypeus two and one-half times the diameter of an anterior median eye. Six large conical teeth on the promargin of the fang furrow, the second being the largest. Four denticles on retromargin. Epigynum as figured.

TYPE LOCALITY: Male holotype and one male paratype shaken from dune grass August 14, 1951, on fore dunes 1.6 miles west of Atlantic Beach, Bogue Bank, Carteret County, North Carolina, taken August 14, 1951; female allotype and three male paratypes, August 21, 1951. All specimens shaken from roots of dune grass.

This species is closely related to *Grammonota texana* Banks but differs

in the position of the conductor and the shape of the tibial apophysis of the male palpal organ, and the details in the female epigynum are distinct.

Grammonota sclerata Ivie and Barrows

Grammonota sclerata IVIE AND BARROWS, 1935, Bull. Univ. Utah, vol. 26, no. 6, p. 14, pl. 6, figs. 48-51.

RECORDS: Carteret County: Beaufort, one female and male, July 23, 1951; one female and male, August 27, 1951; Atlantic Beach, three females, September 16, 1951.

This little species is common beneath dry beach drift and in the bases of dune grass.

Grammonota trivittata Banks

Grammonota trivittata BANKS, 1895, Jour. New York Ent. Soc., vol. 3, p. 86.

RECORDS: Carteret County.

This species is restricted to the intertidal marsh grasses where it is extremely abundant. Collected throughout the year.

EPEIRIDAE

Aranea kisatchia Archer

Aranea kisatchia ARCHER, 1951, Amer. Mus. Novitates, no. 1487, p. 27, fig. 69.

RECORDS: Carteret County: Atlantic Beach, one female, June 23, 1951.

Argiope seminola Chamberlin and Ivie

Argiope seminola CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, vol. 35, no. 9, p. 96, figs. 98-102.

RECORDS: Carteret County: North River near Beaufort, one female, June 2, 1952, swept from a salt marsh.

Mangora floridana Archer

Mangora floridana ARCHER, Amer. Mus. Novitates, no. 1487, p. 14, figs. 31, 56, 60.

RECORDS: Carteret County: Beaufort, one female, July 19, 1951; one female, August 29, 1951, swept from a salt marsh.

Singa keyserlingi (McCook)

Epeira keyserlingi MCCOOK, 1893, American spiders, vol. 3, p. 230, pl. 19, fig. 2.

RECORDS: Carteret County: Beaufort, one male, September 17, 1951, swept from a salt marsh.

MIMETIDAE

Mimetus puritanus Chamberlin

Mimetus puritanus CHAMBERLIN, 1923, Pomona Coll. Jour. Ent. and Zool., vol. 15, p. 5, figs. 1, 6.

RECORDS: Carteret County: Beaufort, one male, August 24, 1951; Atlantic Beach, one female, July 5, 1952.

AGELENIDAE

Agelenopsis emertoni Chamberlin and Ivie

Agelenopsis emertoni CHAMBERLIN AND IVIE, 1935, Bull. Univ. Utah, vol. 26, no. 4, p. 33, pl. 14, fig. 110.

RECORDS: Carteret County: North River near Beaufort, one male, August 29, 1951; Beaufort, one male, September 17, 1951.

LYCOSIDAE

Lycosa annexa Chamberlin and Ivie

Lycosa helluo GERTSCH, 1934, Amer. Mus. Novitates, no. 726, p. 6, fig. 3 (pale var.).

Lycosa annexa CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, vol. 35, no. 9, p. 142, fig. 189.

RECORDS: Carteret County: Beaufort, one male, May 25, 1951.

Lycosa carrana Bryant

Lycosa carrana BRYANT, 1934, Psyche, vol. 41, p. 38, fig. 1.

RECORDS: Carteret County: Beaufort, two females, July 31, 1951.

Lycosa modesta (Keyserling)

Tarentula modesta KEYSERLING, 1876, Verhandl. Zool. Bot. Gesellsch. Wien, vol. 26, p. 626, pl. 1, figs. 11-12.

RECORDS: Carteret County.

This species is abundant in salt marsh drift; adults collected throughout the year.

Pirata apalacheus Gertsch

Pirata apalacheus GERTSCH, 1940, Florida Ent., vol. 23, no. 2, p. 17, figs. 3, 4.

RECORDS: Carteret County: Shackleford Banks, one female, August 14, 1950; Beaufort, one female, July 15, 1951; one male, July 27, 1951.

Pirata suwaneus Gertsch

Pirata suwaneus GERTSCH, 1940, Florida Ent., vol. 23, no. 2, p. 20, figs. 1, 2.

RECORDS: Carteret County: Beaufort, nine males and females, July 15, 1951.

This is the most abundant *Pirata* in the coastal area.

Schizocosa episma (Chamberlin)

Lycosa episma CHAMBERLIN, 1924, Proc. U. S. Natl. Museum, vol. 63, p. 30, pl. 6, fig. 46.

Schizocosa duplex Chamberlin, BRYANT, 1935, Psyche, vol. 42, p. 80, pl. 5, fig. 11.

RECORDS: Carteret County: Beaufort, one female, July 12, 1951; one male, August 8, 1951.

Schizocosa salsa, new species

Figures 15-18

MALE: Total length, 7.50 mm. Carapace, 3.92 mm. long, 3.00 mm. wide. Sternum, 1.78 mm. long, 1.35 mm. wide. Abdomen, 3.57 mm. long.

	I	II	III	IV
Femur	3.21 mm.	3.07 mm.	2.85 mm.	3.64 mm.
Patella	1.21	1.07	0.92	1.21
Tibia	3.78	3.07	2.50	3.92
Metatarsus	3.07	2.85	2.78	4.64
Tarsus	2.21	1.78	1.64	2.35
Total	13.48 mm.	11.84 mm.	10.69 mm.	15.76 mm.

COLOR: Carapace with a median longitudinal yellow band beginning at second eye row. Band slightly invaded by black pigment at level of third eye row, expanded slightly behind middle of carapace and straight from middle to posterior margin. Thoracic groove dark. A submarginal yellow band as wide as median extends from posterior lateral angles of carapace to anterior eye row. Eyes ringed with black; tuft of gray hairs between eyes of second row. Labium and endites yellow. Sternum yellow, with a thin median longitudinal black line and three small black spots on each side between coxae. Abdomen with a median light band tapering to a point at posterior end of abdomen; anteriorly the band includes a pair of longitudinal dark lines which extend posteriorly to about the middle of the abdomen where they unite and continue a short distance as a single

line. Sides of abdomen becoming lighter ventrally. Venter yellow, with a pair of irregular black lines extending from the genital furrow posteriorly and approaching each other in the region of the spinnerets. Distal two-fifths of tibia I with a brush of jet black hairs; distal tip of metatarsus IV dark. All other leg segments yellow.

STRUCTURE: First eye row moderately procurved. Anterior medians closer to anterior laterals than to each other and separated by a little less than their diameter. Eyes of third row separated by two and one-half times their diameter. Sides of head moderately steep. Carapace almost horizontal to posterior end of thoracic furrow, after which there is an even slope to the posterior margin of the carapace. Spination as usual in the genus. Leg ratio: 4:1.2:3. Palpal organ with almost one-half of cymbium extending above alveolus. Details as figured.

FEMALE: Total length, 8.07 mm. Carapace, 4.07 mm. long, 2.85 mm. wide. Sternum, 1.71 mm. long, 1.28 mm. wide. Abdomen, 4.00 mm. long.

	I	II	III	IV
Femur	3.14 mm.	2.85 mm.	2.78 mm.	3.57 mm.
Patella	1.07	0.92	0.85	1.07
Tibia	3.00	2.35	2.28	2.28
Metatarsus	2.28	2.07	2.35	4.21
Tarsus	1.64	1.50	1.57	2.14
Total	11.13 mm.	9.69 mm.	9.83 mm.	13.27 mm.

COLOR: As in male except for absence of brush on tibia I.

STRUCTURE: As in male. Epigynum with narrow lateral guides; details as figured.

TYPE LOCALITY: Male holotype taken on Carrot Island between Horse Island and Taylor's Creek Channel, Beaufort, Carteret County, North Carolina, August 8, 1951; female allotype from Beaufort, September 17, 1951; male paratype, July 8, 1951; Piver Island, Beaufort, three female paratypes, August 27, 1951.

The median apophysis of this species is similar to that of *Schizocosa duplex* Chamberlin, and the distal division of the bulb has a very small horn. However, the brush of hairs present in the male of this species is lacking in *S. duplex*, and the female epigynum has much narrower lateral guides, with the division barely evident.

Trochosa abdita (Gertsch)

Lycosa abdita GERTSCH, 1934, Amer. Mus. Novitates, no. 726, p. 3, fig. 6.

RECORDS: Carteret County: Beaufort, one female, July 15, 1951; one female, August 8, 1951; one female, January 25, 1952.

Trochosa shenandoa Chamberlin and Ivie

Figure 10

Trochosa shenandoa CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, vol. 32, no. 13, p. 37, fig. 78.

MALE: Total length, 7.14 mm. Carapace, 4.00 mm. long, 2.85 mm. wide. Sternum, 1.85 mm. long, 1.42 mm. wide. Abdomen, 3.00 mm. long.

	I	II	III	IV
Femur	2.78 mm.	2.50 mm.	2.14 mm.	2.92 mm.
Patella	1.57	1.35	1.21	1.42
Tibia	2.21	1.78	1.57	2.57
Metatarsus	2.35	2.14	2.28	3.50
Tarsus	1.35	1.35	1.28	1.78
Total	10.26 mm.	9.12 mm.	8.48 mm.	12.19 mm.

Color and structure as in female. Palpal organ as figured.

Chamberlin and Ivie in their description of the female pointed out the close relationship of this species to *Trochosa avara* Keyserling. The palpal organ of the male also is very similar to that of *T. avara* Keyserling, and the differences are of a much lesser degree than between the female epigyna.

RECORDS: Carteret County: Beaufort, seven males and 16 females, January 25, 1952.

This species is very common on the floor of dune grass communities. In contrast to *T. avara*, *T. shenandoa* is mature only during the winter months, at least in the Beaufort region. Adults, including females with egg cases and young, were collected from November through March, while during the summer only immatures were present.

GNAPHOSIDAE

Drassyllus adocetus Chamberlin

Drassyllus adocetus CHAMBERLIN, 1936, Amer. Mus. Novitates, no. 841, p. 21, fig. 27.

RECORDS: Carteret County: Beaufort, two females, July 10, 1951, collected in drift line (Betty Martin).

Drassyllus aprilinus (Banks)

Zelotes aprilinus BANKS, 1904, Jour. New York Ent. Soc., vol. 12, p. 110, pl. 5, fig. 7.

Drassyllus frigidus CHAMBERLIN, 1936, Amer. Mus. Novitates, no. 841, p. 24, figs. 40, 41.

RECORD: Carteret County: Beaufort, one female, January 25, 1952.

Drassyllus creolus Chamberlin and Gertsch

Drassyllus creolus CHAMBERLIN AND GERTSCH, 1940, Amer. Mus. Novitates, no. 1068, p. 13, figs. 26, 27.

RECORDS: Carteret County: Beaufort, one female, June 16, 1952.

Drassyllus ostegae Chamberlin

Drassyllus ostegae CHAMBERLIN, 1936, Amer. Mus. Novitates, no. 841, p. 29, figs. 42, 43.

RECORDS: Carteret County: Beaufort, one male, January 25, 1952.

Poecilochroa unimaculata (Emerton)

Sergiolus unimaculatus EMERTON, 1915, Trans. Connecticut Acad. Arts Sci., vol. 20, p. 142, pl. 1, figs. 9-9c.

Sergiolus clericus CHAMBERLIN, 1922, Proc. Biol. Soc. Washington, vol. 35, p. 153.

RECORDS: Carteret County: Beaufort, one male, May 30, 1951; one female, June 6, 1951.

This species is frequently found in moist drift straw in salt marshes.

CLUBIONIDAE

Castianeira amoena (C. Koch)

Corinna amoena C. KOCH, 1842, Die Arachniden, vol. 9, p. 21, pl. 294.

RECORDS: Carteret County: Atlantic Beach, one female, July 18, 1951.

Castianeira vulnerea Gertsch

Castianeira vulnerea GERTSCH, 1942, Amer. Mus. Novitates, no. 1195, p. 7, figs. 22, 23.

RECORDS: Carteret County: Atlantic Beach, one female, August 28, 1951.

Clubiona littoralis Banks

Clubiona littoralis BANKS, 1895, Jour. New York Ent. Soc., vol. 3, p. 79.

Clubiona latifrons EMERTON, 1913, Trans. Connecticut Acad. Arts Sci., vol. 18, p. 220, pl. 2, figs. 12-12b.

RECORDS: Carteret County: North River near Beaufort, one female, July 13, 1951; Beaufort, one male, May 19, 1952.

This species is not abundant but was occasionally swept from salt marsh grass.

Clubiona nicholsi Gertsch

Figure 19

Clubiona nicholsi GERTSCH, 1941, Amer. Mus. Novitates, no. 1148, p. 8, figs. 5, 6.

FEMALE: Total length, 5.75 mm. Carapace, 2.37 mm. long, 1.70 mm. wide. Sternum, 1.22 mm. long, 0.75 mm. wide. Abdomen, 3.12 mm.

	I	II	III	IV
Femur	1.95 mm.	1.42 mm.	1.37 mm.	1.87 mm.
Patella	0.75	0.90	0.72	0.82
Tibia	1.20	1.25	0.87	1.45
Metatarsus	0.95	0.85	1.02	1.87
Tarsus	0.50	0.60	0.45	0.52
Total	5.35 mm.	4.82 mm.	4.43 mm.	6.53 mm.

COLOR AND STRUCTURE: Essentially as in male. Epigynum as figured.

RECORDS: Carteret County: Beaufort, one male, June 6, 1951; one female, July 19, 1951; three males and one female, June 12, 1952.

Both this species and the following one, *Clubiona plumbi* Gertsch, are abundant in the Beaufort maritime area, but they are very sharply separated in their ecological distribution. *Clubiona plumbi* is most abundant in the xeric habitats, such as dune grass and dry beach drift. *Clubiona nicholsi*, on the other hand, is found in thick moist drift straw in the intertidal marshes. The two species never occur in the same habitat.

Clubiona plumbi Gertsch

Clubiona plumbi GERTSCH, 1941, Amer. Mus. Novitates, no. 1148, p. 12, figs. 21, 22.

RECORDS: Carteret County: Beaufort, one male, August 27, 1951; one male and female, November 17, 1951.

Micaria browni, new species

Figure 11

FEMALE: Total length, 3.75 mm. Carapace, 1.57 mm. long, 0.90 mm. wide. Sternum, 0.87 mm. long, 0.60 mm. wide. Abdomen, 1.97 mm. long.

	I	II	III	IV
Femur	1.17 mm.	1.05 mm.	0.85 mm.	1.37 mm.
Patella	0.50	0.45	0.50	0.50
Tibia	0.95	0.77	0.55	1.10
Metatarsus	0.77	0.72	0.62	1.17
Tarsus	0.75	0.62	0.52	0.70
Total	4.14 mm.	3.61 mm.	3.44 mm.	4.84 mm.

COLOR: Carapace golden, eyes ringed with black. Sternum and coxae yellow. Femur and patella of legs golden, tibia and metatarsus darker, tarsus light. Dorsum of abdomen yellow and clothed with iridescent white scales; no distinct white bands present although specimen was somewhat rubbed.

STRUCTURE: Anterior eye row moderately procurved. Anterior medians separated by a diameter and slightly closer to the somewhat larger anterior lateral eyes than to each other. Posterior eye row procurved. Eyes subequal. Posterior median eyes equidistant. Posterior eye row longer than anterior (9/7). Median ocular area as wide as long and wider posteriorly than anteriorly (11/9). Height of clypeus slightly less than twice the diameter of an anterior median eye. Carapace convex, the highest point at level of second coxae. Sternum ending in a point which separates hind coxae. Abdomen constricted around middle. Epigynum as figured.

TYPE LOCALITY: Female holotype collected July 15, 1950, on the west end of Shackleford Banks, Carteret County.

This species belongs to the *montana* group of *Micaria*. The epigynum is quite similar but differs in details from *M. gertschi* Barrows and Ivie, and the abdomen is constricted.

This species is named in honor of Dr. E. E. Brown, professor of biology at Davidson College.

Phrurotimpus illudens Gertsch

Phrurotimpus illudens GERTSCH, 1941, Amer. Mus. Novitates, no. 1147, p. 18, figs. 49-51.

RECORDS: Carteret County: Beaufort, one female, August 1, 1951; one male and female, June 11, 1952.

This is a common species on the floor of maritime shrub communities.

Phrurotimpus emertoni (Gertsch)

Phrurolithus emertoni GERTSCH, 1935, Amer. Mus. Novitates, no. 805, p. 9, fig. 20.

RECORDS: Carteret County: Roe, one female, June 21, 1952.

Scotinella pintura (Ivie and Barrows)

Phrurolithus pinturus IVIE AND BARROWS, 1935, Bull. Univ. Utah, vol. 26, no. 6, p. 22, figs. 63-65.

RECORDS: Carteret County: Atlantic Beach, one female, June 8, 1952.

ANYPHAENIDAE

Oxysoma cubana Banks

Oxysoma cubana BANKS, 1909, 2d Rept. Estac. Central Agr. de Cuba, pt. 2, p. 157, pl. 45, fig. 7.

Gayennina britcheri GERTSCH, 1935, Amer. Mus. Novitates, no. 805, p. 21, figs. 35, 36.

RECORDS: Carteret County: North River near Beaufort, one female, July 26, 1951.

Teudis fragilis (Banks)

Anyphaena fragilis BANKS, 1897, Canadian Ent., vol. 29, p. 194.

RECORDS: Carteret County: North River near Beaufort, one female, July 26, 1951.

THOMISIDAE

Philodromus inaequipes Banks

Philodromus inaequipes BANKS, 1900, Canadian Ent., vol. 32, p. 99, pl. 2, fig. 21, pl. 3, fig. 33.

RECORDS: Carteret County: Atlantic, one female, June 21, 1952.

Philodromus undarum, new species

Figures 12-14

MALE: Total length, 3.00 mm. Carapace, 0.95 mm. long, 1.35 mm. wide. Sternum, 0.85 mm. long, 0.77 mm. wide. Abdomen, 1.62 mm. long.

	I	II	III	IV
Femur	1.65 mm.	2.00 mm.	1.57 mm.	1.55 mm.
Patella	0.62	0.75	0.60	0.52
Tibia	1.40	1.80	1.17	1.12
Metatarsus	1.40	1.67	1.12	1.20
Tarsus	0.75	0.90	0.62	0.65
Total	5.82 mm.	7.12 mm.	5.08 mm.	5.04 mm.

COLOR: Carapace golden, speckled with dark brown on each lateral half, leaving a clear median stripe as wide as posterior eye row. Eyes surrounded by white. Clypeus speckled. Endites and labium pale. Sternum pale yellow, speckled with dark brown along margin. Legs golden, with a few scattered dark spots on more distal segments. Abdomen pale yellow mottled with brown, leaving an indistinct inverted cone of light widest at anterior end and narrowing to posterior. Venter pale.

STRUCTURE: Anterior eye row moderately recurved. Eyes equal.

Anterior median eyes separated from laterals by a diameter and three times as far from each other as from the laterals. Posterior eye row slightly recurved and longer than the anterior. Median eyes closer to each other than to the larger laterals. Median ocular area wider than long (41/31) and twice as wide posteriorly as anteriorly. Clypeus as high as median ocular area. Ocular area and clypeus with strong spines. Tibia I and II with two pairs of ventral spines; metatarsus I and II with two pairs of ventral spines. Leg ratio: 2:1:3:4. Details of palpal organ as figured.

TYPE LOCALITY: Male holotype collected June 5, 1951, from Carrot Island between Horse Island and Taylor's Creek Channel, Beaufort, Carteret County.

This species is related to *Philodromus marxi* Keyserling but differs in that the lateral tibial apophysis is wider and more triangular at the tip.

SALTICIDAE

Neonella vinnula Gertsch

Neonella vinnula GERTSCH, 1936, Amer. Mus. Novitates, no. 852, p. 24, figs. 28, 29.

RECORDS: Carteret County: Beaufort, one male, September 17, 1951; one female, January 25, 1952.

DICTYNIDAE

Dictyna gloria Chamberlin and Ivie

Dictyna gloria CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, vol. 35, no. 9, p. 118, fig. 171.

RECORDS: Carteret County: Beaufort, one female, July 31, 1951; three females, August 7, 1951; one male and female, July 7, 1952.

Dictyna savanna Chamberlin and Ivie

Dictyna savanna CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, vol. 35, no. 9, p. 121, figs. 161-169.

RECORDS: Carteret County.

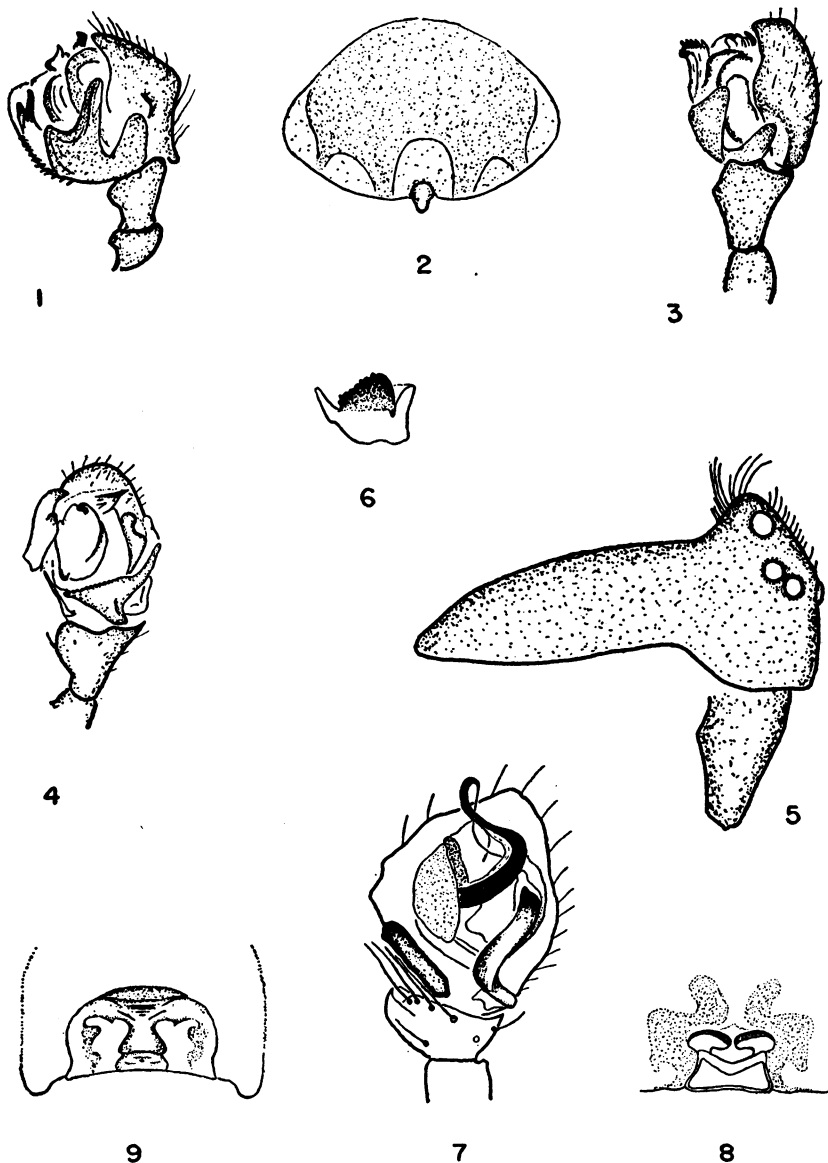
This species is very abundant in intertidal grasses; adults collected from April through October.

Lathys albida Gertsch

Scotolathys alba CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, vol. 35, no. 9, p. 126, figs. 178, 179 (name preoccupied).

Lathys albida GERTSCH, 1946, Amer. Mus. Novitates, no. 1319, p. 4.

RECORDS: Carteret County: Beaufort, one male and three females, January 25, 1952.



FIGS. 1, 2. *Meioneta beaufortensis*, new species. 1. Left male palpus, lateral view. 2. Epigynum.

FIGS. 3, 4. *Meioneta grayi*, new species, left male palpus. 3. Lateral view. 4. Ventral view.

FIGS. 5-8. *Grammonota gallinoides*, new species. 5. Carapace of male, lateral view. 6. Right tibia of male palpus, dorsal view. 7. Right male palpus, ventral view. 8. Epigynum.

FIG. 9. *Ceraticelus anomalus* Gertsch, epigynum.

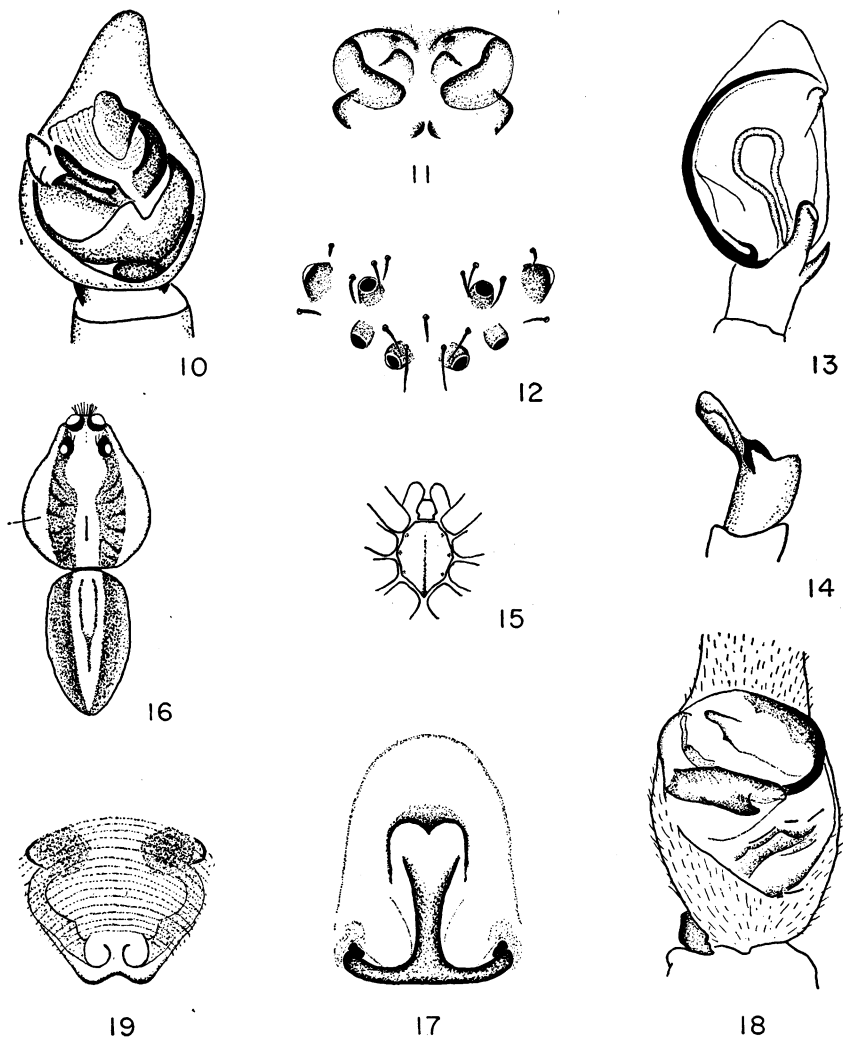


FIG. 10. *Trochosa shenandoa* Chamberlin and Ivie, right male palpus, ventral view.

FIG. 11. *Micaria browni*, new species, epigynum.

FIGS. 12-14. *Philodromus undarum*, new species. 12. Eye pattern, dorso-frontal view. 13. Left male palpus, ventral view. 14. Left tibia of male palpus, lateral view.

FIGS. 15-18. *Schizocosa salsa*, new species. 15. Sternum of male. 16. Carapace and abdomen of male, dorsal view. 17. Epigynum. 18. Right male palpus, ventral view.

FIG. 19. *Clubiona nicholsi* Gertsch, epigynum.

