

South Newfane; June, 1927; Miss E. B. Bryant collection. Female allotype, New Hampshire; Franconia; Nathan Banks collection.

This species, commonly known as *Dictyna arundinaceoides* Keyserling for several years, is closely related to *D. volucripes* Keyserling; it differs in that the tibial apophysis of the palp is straighter; the lateral lobe of the tip of the conductor is not tilted downward as in *volucripes*; in the mandible the basal tooth is much more distinct than in *volucripes*; and the median emargination of the mandible is gentler than in *volucripes*.

Notes on Some Workers in Texas Entomology, 1839-1880¹

S. W. Geiser

Extended historical investigations have revealed some ninety-eight entomologists, mostly amateurs, who collected or studied insects in Texas from 1833 to 1880. The earliest of these naturalists appears to have been Thomas Drummond, Scottish botanist, who collected insects for William Kirby, in Austin's Colony in 1833-34. I list here with brief biographical notes twenty-three of the more noted or productive of these students and collectors. Entomologists will at once recognize and remember eleven of the workers listed: Thomas Affleck, G. W. Belfrage, E. T. Cresson, Jacob Boll, S. S. Haldeman, Harry Brous, L. Heiligbrodt, G. Lincecum, J. D. Mitchell, Reverend H. C. McCook, and E. A. Schwarz. I hope that no apology is needed for the inclusion of the other twelve and that the publication of this list will stimulate further historical activity by members of the Texas Entomological Society. During the past decade this society has collected historical materials on former entomological work in Texas—data well worth preservation for historians and men of science. Its activity in setting up memorials in the last five years to Gustav W. Belfrage and Wilhelm Bruckish deserves unstinted praise alike from entomologists and historians.

¹Data-sheet accompanying an address, "Fighting the Insects in Early Texas," given December 4, 1945, at Dallas, at the annual banquet of the Texas Entomological Society and the American Association of Economic Entomologists, meeting jointly. (Reprinted from *The Southwestern Historical Quarterly*, vol. XLIX, 1946, pp. 593-98.)

The selected list of early workers in Texas entomology follows:

AFFLECK, Isaac Dunbar (1844-1919).—Affleck worked out several points for H. C. McCook on the life-history of the Texas agricultural ant. He observed weather relations, the forms of the "disks" of the nests, studied the sorts of seeds stored in the nests, and described the "marriage flight" in the species. He also collected for McCook notes on the cutting ant. [See McCook, *The Natural History of the Agricultural Ant of Texas* (1879), 15.] Affleck was born in Washington in Adams County, Mississippi, October 24, 1844, and died at Austin, Texas, April 18, 1919. He was the son of Thomas Affleck. His education was interrupted by the Civil War, in which he was a member of Terry's Texas Rangers. He was a great reader and student all of his life.

AFFLECK, Thomas (1812-68).—Affleck came to Brenham, Texas, from Washington, Mississippi, in 1857 and there resided until his death. A native of Scotland, he had come to America in 1832; he was editor of the *Western Farmer & Gardener* (Cincinnati), 1840-42 and had a large nursery at Washington, Mississippi (1842-57), and at Brenham (1857-68). He published his valuable *Bee Breeding in the West* at Cincinnati in 1841. "He was a great nurseryman and progressive agriculturist, and one of the greatest forces in rehabilitation of Texas after the Civil War." Numerous publications: Geiser, *Horticulture and Horticulturists in Early Texas* (1945, 31-32, gives numerous titles; see also *Dictionary of American Biography*.

BELFRAGE, Gustav Wilhelm (1834-82).—A Swedish entomologist, he came to Texas in 1867; he worked chiefly in McLennan, Bosque, and perhaps Williamson counties. Ezra T. Cresson's *Hymenoptera Texana* (1872) was based largely on his collections of Hymenoptera. Extensive collections by Belfrage are in the United States National Museum, the Natural History Museum at Stockholm, the Academy of Natural Sciences of Philadelphia, the British Museum (Natural History), the Museum of Comparative Zoology at Cambridge, and the Royal Natural Museum at Brussels. For biographical details, see Geiser, *Naturalists of the Frontier* (1937), 289 ff.

BOLL, Jacob (1828-80).—This Swiss naturalist and entomologist who came to Texas in 1869 was at one time Assistant in Entomology at the Museum of Comparative Zoology under Louis Agassiz. In 1869, he explored the natural history of Texas (all fields) for the Museum of Comparative Zoology. Eduard Dämel of Hamburg was Boll's European agent. Boll's collections of insects at his death were divided between B. Neumoegen and C. V. Riley and finally reached the Brooklyn Museum and the United States National Museum. After 1878, Boll collected vertebrate fossils from the Permian of northwest Texas for Professor E. D. Cope of Philadelphia. These collections are now in the American Museum of Natural History. Boll's work in the exploration of the natural history of Texas was of the greatest importance. He published a number of papers in botany, entomology,

and geology. For further data, see Geiser, *Naturalists of the Frontier*, (1937), 22 ff.

BROUS, Dr. Harry A. (?1850-1906).—Brous came with Professor E. D. Cope to Helotes, Bexar County, Texas, in September, 1877. He worked here about three weeks and made reports to the United States Entomological Commission. A notable entomologist, he was especially interested in beetles. Native of Manhattan, Kansas, he was graduated from the Kansas State Agricultural College in 1874 and from the Jefferson Medical College, Philadelphia, in 1878.

BRUCKISCH, Wilhelm (1802-77).—Bruckisch, scientific beekeeper, early associate, friend and protagonist of Pastor Johann Dzierzon, "the beemaster of Europe," was born at Postelwitz, Silesia, was "Rentmeister" at Koppitz bei Grottkau, in Silesia. He founded (1847) the Silesian Beekeepers' Society and was its president until his departure for Texas in 1853. He was beekeeper and horticulturist at Hortontown on the Guadalupe (near New Braunfels) from 1853 to 1877. He published six German editions of his *Bienenbuch* (1847-61), and his *Besste* [sic] *Bienenzuchtmethodo nach Pfarrer Dzierzon* (1866). He was also editor (1850-53) of *Die preussischen Biennachrichten*. He also published an extended article, "Bee Culture," in the *Annual Report for 1860* (Agriculture) of the United States Commissioner of Patents (pp. 268-301).

BRYANT, A. H. R.—An excellent student of entomology, resident of Clarksville (1871), Kemp (1873), and Pilot Point (1877-85), Bryant was captain of Co. D., 34th Dismounted Cavalry, Walker's Texas Division, C.S.A. In 1871 he sent gifts of insects and natural history specimens to the museum of the United States Department of Agriculture, and in 1873, examples of the work of carpenter bees in cedar. He was correspondent of the United States Entomological Commission in 1877. Bryant published three papers on Texas insects in the *American Entomologist*, II, (1869-70).

CRESSON, Ezra Townsend (1838-1926).—During the year 1859, this (later) distinguished entomologist lived at New Braunfels, Texas, and made insect and other collections. His *Hymenoptera Texana* (1872) is a valuable work on Texan entomology. He was a notable entomologist, long connected with the American Entomological Society. His published papers number at least fifty.

FRIEDRICH, Otto (1800-80).—Lepidopterist and naturalist, living in the hills near present Gruene, Comal County, Friedrich came to Texas with Ferdinand Lindheimer about the time of the Texas Revolution. He returned to Germany after the Revolution but came back to Texas to stay in 1850. He was Smithsonian meteorological observer at New Braunfels from 1857 to 1860.

HALDEMAN, Samuel Stehman (1812-80).—At the end of the year 1851, Haldeman, an entomologist and philologist, came to Texas from Philadelphia. He had been offered the presidency of some unidentified Texas educational institution. He declined the proffered position and started back to Philadelphia in January, 1852. On the return trip

he paused to inspect the Masonic College at Selma, Alabama. Its presidency was offered to him, and he acted as its president from January to October, 1852. Biographies of Haldeman usually state that he was professor of natural history at the University of Pennsylvania from 1851 to 1855 and make no mention of the Selma episode nor the call to Texas. Haldeman was 'a consummate naturalist and entomologist.

HEILIGBRODT, Ludolph (1847-1911).—While a clerk in the general store of F. Soder & Company, at Fedor, Lee County, Heiligbrodt encountered the published works of Hermann Burmeister. These stimulated him to collect insects. He sent a collection to the agricultural museum of the United States Department of Agriculture (1871), and during the same year, *naturalia* to the Smithsonian Institution. Cresson's *Hymenoptera Texana* (1872) used his collections from Bastrop County. For forty years Heiligbrodt was a teacher in the schools of Bastrop. He was corresponding with Samuel Henshaw in 1878. In 1883-84, his very extensive collection of insects was in the Texas exhibit at the New Orleans Cotton Exposition.

HOWARD, Dr. William Rapp (1848-1912).—An apiculturist, Howard was born in Fulton County, Arkansas, and died in Fort Worth, Texas. In 1852, his parents moved to Marshfield, Missouri. From 1863 to 1865, he attended school in Rhode Island. "He graduated A.B. from Kelso University." In 1873, he took M.D. from Saint Louis Medical College, and (1879) from the College of Physicians & Surgeons of Baltimore. He came to White Rock, Hunt County, Texas, in 1876, and practiced there until 1886, when he removed to Fort Worth. He was a member of the first faculty of the medical department of Fort Worth University, and occupied the chair of Histology, Bacteriology, Pathology, and Hygiene. Outside of medicine, he did efficient and valuable work on the biology of the honey bee. In 1877, when the Texas State Beekeepers' Association was formed, he was elected its first secretary. In 1894, the *American Bee Journal* published and distributed his excellent work, *Foulbrood: its Natural History and Rational Treatment*. Biographical data, with bibliography, in Geiser, *Horticulture and Horticulturists in Early Texas* (1945), 52-53.

KING, Helen Selina (Lewis).—Mrs. King was the wife of Dr. V. O. King, at one time a well-known physician in Texas, residing in San Antonio. She published several valuable papers on light-producing insects in *Psyche* in the 'seventies and 'eighties.

LINCECUM, Dr. Gideon (1793-1874).—Lincecum, a naturalist, was a resident at Long Point, Washington County, Texas, from 1848 to 1874. His most noted observations were made on the agricultural ant of Texas. His "Autobiography" in *Mississippi Historical Society Publications*, VIII (1904), 443-519; Geiser, *Naturalists of the Frontier* (1937), 253 ff.; and P. I. Nixon, *Texas State Journal of Medicine*, XXXVI (1940), 34-38 give together a full account of his work. He published a number of papers on insects in *American Naturalist*, the *Texas Almanac*, and other serials.

MATHES, Dr. Benno (1825-1911).—This German-American herpetologist and all-round naturalist in his *Reise-Bilder; Bilder aus Texas* (1861) 78ff., gives an enchanting account of a fight between a wasp and a tarantula, anticipating Lincecum's later accounts of the tarantula-killer of Texas. Matthes was born in Liegnitz, Silesia, on September 15, 1825; lived in Texas from 1853 to 1859, and from 1865 to 1911 (chiefly at Round Top and Fayetteville, in Fayette County). He died at Comfort, Kendall County, April 30, 1911. Biographical materials (with bibliography and portrait) in *Field & Laboratory*, IX (1941), 37-44.

MITCHELL, Joseph Daniel (1848-1922).—Mitchell was an amateur student of Texas mollusks, insects, and reptiles. He lived at Victoria where his scientific activity began about 1876 or 1878. For some years (after 1905) he was a collaborator of the United States Bureau of Entomology. He published on cotton-insects, and cactus-feeding insects, to name but two fields. He collected extensively in all fields of natural history and sent specimens to the United States Department of Agriculture or the United States National Museum. Mitchell also published papers on Texas mollusca, Texas reptiles, the weevils of Victoria County, and the ants of Victoria County. He also left many unpublished notes on Texas natural history, made over many years.

McCook, Rev. Henry Christopher (1837-1911).—In the summer of 1876, McCook studied the agricultural ant of Texas, at Barton Springs near Austin. His book based on this study is *The Natural History of the Agricultural Ant of Texas*, which appeared in 1879. Numerous biographical sources: see *Dictionary of American Biography*.

PAGE, Dr. Frederick Benjamin (1798-1857).—In 1845, under the pseudonym of "A. Suthron," Dr. Page published his *Prairiedom; Rambles and Scrambles in Texas or New Estremadura*. This book was based on travels made in 1839, with Dr. J. L. Riddell of New Orleans, through the settled parts of Texas. Dr. Page gives a beautiful account of the agricultural ant of Texas; it is therefore incorrect to say (as W. M. Wheeler has done) that S. B. Buckley first noted the agricultural or harvester ant in the New World. Dr. Page observed them at Colonel Luckett's plantation about sixteen miles west of Nacogdoches. Dr. Page was born at Hallowell, Maine, July 5, 1798, and died at Edwards, Mississippi, July 26, 1857. He took the degrees of A.B. (1818) and A.M. (1821) at Bowdoin; he also attended medical courses at Bowdoin and graduated M.D. at Harvard in 1821. He practiced medicine successively at Portland, Maine, Ascension, Louisiana, and Donaldsonville, Louisiana.

RIGGS, Reverend Warner Bradley (1849-1905).—Riggs helped McCook^{qv} in his study of the Texas agricultural ant. At Brenham, he worked on the shape, etc., of the nest and also observed fighting between different stocks of the ant. He was minister of the Presbyterian Church at Brenham (1876-85) and of the Second Presbyterian Church at Dallas (1888-1905). Riggs was born in Wayne County, New York;

took his A.B. degree at Yale (1871); went to Texas (1876), and died in Austin in 1905.

SCHWARZ, Eugen Amandus (1844-1928).—In 1878, he was sent to Texas to make investigations on the cotton worm, and during the rest of his life he intermittently did entomological field investigations in Texas for the government. His most notable work with us was on the cotton boll weevil (1894 and later). Schwarz was one of the most distinguished workers in the United States Bureau of Entomology. A native of Liegnitz, Silesia, he studied at Breslau and Leipzig and came to America in 1872.

STELLE, James Parish (?1828-93).—A noteworthy student of entomology, Stelle came to Texas in 1880 to take charge of the cotton worm investigation. He made his headquarters in the Colorado bottom (at ?Columbus) and worked in divers localities in Texas [*American Entomologist*, III (1880), p. 197]. In 1869-70, while he was a resident of Savannah, Tennessee, Stelle wrote a number of papers published in Volume II of the *American Entomologist*. He was for a time agricultural editor of the Fort Worth (Texas) *Gazette* (August, 1890, through March 31, 1892). Stelle is reported to have been a native of Illinois; to have been educated in medicine; later to have become a reporter on the Louisville (Kentucky) *Journal*. In 1864 he published a small book on the Wyandotte Cave of Crawford County, Indiana. In 1868 and 1873 he published two editions of *The American Watchmaker and Jeweler*. In 1869 he became agricultural editor of the Mobile (Alabama) *Register*. This connection he generally retained until about 1888, although Cassino has him at Greenville, Alabama, in 1886. Two papers by Stelle on Indian mounds in Tennessee are published in the *Smithsonian Report for 1870* (1871), 408-20. J. F. Duggar has a biography of Stelle in L. H. Bailey's *Cyclopaedia of American Agriculture*, IV (1909), 614.

WADGYMAR, Dr. Arthur (1827-99).—Wadgymer was the patron and early protector of Franz G. Schaupp at Carrizo Springs in 1884. (During this year, and for many years subsequently, Schaupp was collector of Odonata for Hermann Hagen or J. G. Needham in Texas.) Dr. Wadgymer wrote a brief report on the diseases of cattle and horses in Medina County (1877) and on the agriculture of Medina County (1880) for the United States Department of Agriculture and the United States Census Bureau, respectively. Wadgymer was interested in the insects and plants of southwestern Texas (De Witt, Bexar, and Medina counties). Cassino's *Directory* (1888) gives Wadgymer's interests as "botany, chemistry, entomology, microscopy." Wadgymer was born at Czakaturen, Hungary, May 26, 1827; he took his M.D. degree at Vienna 1847; he was Surgeon in the Hungarian army (1848-49), Surgeon in the Dutch navy (1850-52), and was Surgeon in the Crimean War (1854-56). In 1865, he was professor of chemistry and botany in the St. Louis (Missouri) College of Pharmacy and in 1866-67, professor of chemistry and botany in the Humboldt Medical College of St. Louis. Before coming to Texas, he practiced medicine in St. Louis and Cairo, Illinois. He published papers in medical jour-

nals, notably one on "Trichina spiralis, and its origin and development in muscle, and the disease trichinosis" in *St. Louis Medical Reporter*, I (1866-67), 97-109. Dr. Wadgymer came to Texas in the early 'seventies—probably in 1873—and is believed to have lived first at Myerville, De Witt County, and then at Cuero, Castroville, and San Antonio, before going to Carrizo Springs. Dr. Wadgymer died in 1899.

WALKER, Dr. Elijah Millington (1824-68).—Walker, at that time registered from Yorktown, Texas, took the M.D. degree from the University of Louisiana in 1854. On June 9, 1854, he read a paper on the agricultural ant of Texas before the New Orleans Academy of Science. Walker came to Texas to practice and was elected a corresponding member of the New Orleans Academy of Science. Dr. Walker was born in Middle, Tennessee, on November 17, 1824. He moved with his parents to Marshall County, Mississippi, attended school in Oxford, Mississippi, and also studied medicine as an apprentice. He attended Jefferson Medical College in Philadelphia (1849-50) and practiced medicine in Oxford without a degree. In the fall of 1852, he went with his wife to Helena, Karnes County, Texas. In 1853-54, he studied at the medical school of the University of Louisiana and obtained his degree. He moved from Helena to Gonzales, gained a large practice, and remained there until after the Civil War. He then moved twelve miles west of Gonzales and bought an estate, "Ashwood," and kept up his practice there. He died in 1868 of malaria. Besides his ant paper, printed in the early proceedings of the New Orleans Academy of Science, Dr. Walker published several meritorious agricultural papers in the *Southern Cultivator*, XXV and XXVI (1867-68).

Greenleaf Cilley Nealley (1846-1896), Texan Botanist

S. W. Geiser

In the July, 1946, issue of *FIELD & LABORATORY*, Dr. Rogers McVaugh¹ has published an account of the travels and plant-collecting activities of G. C. Nealley, little-known botanist of Texas. While McVaugh's paper was in its final revision, and passing through the press, I endeavored to bring into shape for publication a biographical footnote of him from my accumulated notes of several years. The task offered difficulties; many gaps of information could not be filled without wide correspondence; the result was that the note had to be deferred to the present.

In his paper, McVaugh pointed out that Nealley came from Burlington, Iowa, to Texas A. & M. College in April,

¹Rogers McVaugh, "The Southwestern travels and plant-collections of G. C. Nealley, 1887-1879." (*Field & Laboratory*, vol. XIV, 1946, pp. 70-88.)