

Status of C. E. Needham's fusulinids described in NMBMMR Bulletin 14

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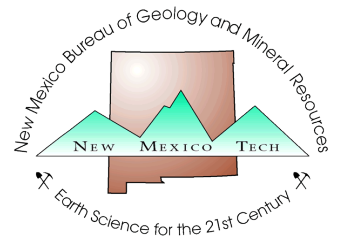
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In 1937, the State Bureau of Mines and Mineral Resources (now the New Mexico Bureau of Mines and Mineral Resources; NMBMMR) published Bulletin 14, *Some New Mexico Fusulinidae*, by C. E. Needham. This significant publication was based on 58 collections that Needham made from 26 localities in 1933 and 1934. He described 29 fusulinid taxa, including 15 new species and two new subspecies of Pennsylvanian and Permian age. The Needham specimens were assigned NMBMMR paleontology catalog numbers, and for some years requests to examine Needham's collections have been received by NMBMMR staff. These requests came from paleontologists in academic institutions and private industry. Efforts to locate the Needham material in our collections were unsuccessful, and we were not able to find documentation showing that part or all of the collections had been transferred. Inquiries to academic institutions that may have received the specimens were unsuccessful.

Finally, we contacted Frederick J. Collier, Collections Manager, Department of Paleobiology of the U.S. National Museum of Natural History (USNM), a member of the Smithsonian Institution. The collections and archives of the National Museum provided a partial solution to our problem.

In 1938, C. E. Needham wrote Lloyd G. Henbest, of the USNM, the following letter (copy supplied by F. J. Collier):

With the approval of Pres. E.H. Wells, New Mexico School of Mines, I have shipped by parcel post the type specimens of Fusulinidae described in my report on "Some New Mexico Fusulinidae," New Mexico School of Mines, Bulletin 14, 1937. These are to be deposited permanently in the United States National Museum on the following two conditions: (1) The Museum will lend me the types for my own personal and temporary use upon request from me, and (2) the Museum will fulfill its promise made through you with the official approval of Dr. C.E. Resser, Curator of Invertebrate Paleontology, to supply the New Mexico School of Mines within a reasonable length of time with a set of the larger Foraminifera from the Ocala limestone, Eocene, in the southeastern United States. I understand you will furnish these Eocene Foraminifera from the collections of the U.S. Geological Survey through the Museum.

I will appreciate your transferring the types, a list of which is attached hereto [see Table 1], to the proper Museum authority for accessioning.

Please request the Museum to acknowledge the deposit and the conditions herein stated.

Very sincerely yours,
C.E. Needham [signed]

Table 1 lists the fusulinids published in Bulletin 14 that are now held by the USNM and includes Needham's types, the specimen numbers used in Bulletin 14, and the newer USNM numbers provided by F. J. Collier (shaded portion of table). However, not all the material described in Bulletin 14 was transferred to the USNM by Needham. Table 2 lists fusulinid material described in Bulletin 14 that is still missing.

Status of C. E. Needham's fusulinids described in NMBMMR Bulletin 14

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TABLE 1—Needham's list of type specimens. The USNM numbers have been added for those specimens located currently in the National Museum (shaded area).

List of type specimens of Fusulinidae from the Pennsylvanian and Permian of New Mexico representing the following publication: C. E. Needham. *Some New Mexico Fusulinidae*: New Mexico School of Mines, Bull. 14, 1937.

Name	Number of spec. on slide or in container	U.S. National Museum (USNM) numbers	Collector's No.	Source
<i>Fusulina novamexicana</i> n. sp.	2 (slide)	{ 101118 e 101118 a	P 18.6 P 18.7	Socorro Mt. N. M.
<i>Fusulina novamexicana</i> n. sp.	2 (slide)	{ 101118 b 101118 c	P 18.8 P 18.9	"
<i>Fusulina novamexicana</i> n. sp.	2 (slide)	101118 g	P 18.10	"
<i>Fusulina novamexicana</i> n. sp.	2 (slide)	{ 101118 d 101118 f	P 18.11 P 18.12	"
<i>Fusulina pattoni</i> n. sp.	vial	Not located	P 15.0	Hermosa fm., Archuleta Co., Colo.
"	3 chips	101110 d	P 15.1	Hermosa fm., Archuleta Co., Colo.
"	2 (slide)	101110 e	P 15.2	Hermosa fm., Archuleta Co., Colo.
"	1 (slide)	101110 f	P 15.3	Hermosa fm., Archuleta Co., Colo.
"	1 (slide)	101110 a	P 15.4	"
"	1 (slide)	101110 g	P 15.5	"
"	2 (slide)	101110 h & i	P 15.6	"
"	1 (slide)	101110 b & c	P 15.7	"
<i>Fusulina socorroensis</i> n. sp.	1 (slide)	101107 a	P 16.1	Lower Magdalena fm. Socorro Mts. N. M.
"	1 (slide)	Not located	P 16.2	"
"	1 (slide)	101107 b	P 16.3	"
"	1 (slide)	101108 d	P 18.1	"
"	1 (slide)	101108 b & c	P 18.2	"
"	2 (slide)	101108 a	P 18.3	Sent-not listed
"	2 (slide)	101108 d	P 18.4	"
<i>Fusulina taosensis</i> n. sp.	1 (slide)	101109 d	P 50.1	Lower Magdalena 8-9 miles east of Taos, New Mexico
"	2 (slide)	101109 b	P 50.2	"
"	1 (slide)	101109 c	P 50.3	"
"	2 (slide)	101109 e	P 50.4	"
"	2 (slide)	101109 a	P 50.5	"
<i>Pseudoschwagerina morsei</i> n. sp.	2 (vial)	101121 c & e	P 1.0	Hueco ls. Oro Grande, New Mexico
"	2 (slide)	101121 a & f	P 1.5	"
"	2 (slide)	101121 i & j	P 1.18	"
"	2 (slide)	101121 b & g	P 1.19	"
"	2 (slide)	101121 h & d	P 1.24	"
<i>Schwagerina emaciata</i> var.				
<i>Schwagerina jarillaensis</i> n. sp.	3 (vial)	101119 f	P 1.00	"
"	1 (slide)	101119 b	P 1.9	"
"	2 (slide)	101119 g	P 1.11	"
"	2 (slide)	101119 h	P 1.12	"
"	2 (slide)	101119 i	P 1.13	"
"	1 (slide)	101119 c	P 1.17	"
"	1 (slide)	101119 a	P 1.20	"
"	2 (slide)	101119 d & e	P 1.21	"

continued on the following page

In Needham's list to Henbest (Table 1), several specimens of *Fusulina pattoni* n.sp. are listed; however, P 15.0, a vial with three chips, could not be located. P 15.0 was not included as a cataloged specimen in Bulletin 14 (pp. 26-27), nor is P 15.2 listed in the publication. Similarly, the Henbest list includes P 16.2, a slide of *Fusulina socorroensis*.

This specimen was not located, but the *F. socorroensis* collection at the USNM included an unlisted specimen, P 18.3, which is included as a syntype in Bulletin 14 (p. 23).

Needham sent the U.S. National Museum specimens of *Triticites kellyensis*, P 21.1, P 21.2, P 21.3, and P 21.4. Bulletin 14 lists these specimens, found near Kelly in the Magdalena

Name	Number of spec. on slide or in container	U.S. National Museum (USNM) numbers	Collector's No.	Source
<i>Schwagerina thompsoni</i> n. sp.	2 (vial)	101120 c	P 32.000	Hueco ls. near Hueco Tanks, El Paso Co., Tex.
"	1 (slide)	101120 d	P 32.9	"
"	2 (slide)	101120 a & b	P 32.10	"
"	2 (slide)	101120 e & f	P 32.11	"
<i>Triticites cuchilloensis</i> n. sp.	2 (slide)	101113 a & b	P 26.1	Middle Magdalena Cuchillo Mts. Sierra Co., New Mexico
"	2 (slide)	101113 c & d	P 26.2	"
<i>Triticites fresnalensis</i> n. sp.	2 in vial	101117 f	P 3.0	Top of Magdalena fm. Fresnal Canyon, Otero Co., New Mexico
"	4 (slide)	101117 a, b, & d	P 3.1	"
"	1 (slide)	101117 g	P 3.2	"
"	2 (slide)	101117 c & e	P 3.3	"
"	2 (slide)	101117 h & i	P 3.4	"
<i>Triticites gallowayi</i> n. sp.	2 (slide)	101115 a & e	P 8.1	U. Magdalena fm. La Luz Canyon, Otero Co., N.M.
"	2 (slide)	101115 b & f	P 8.2	"
"	1 (slide)	101115 c	P 8.3	"
"	2 (slide)	101115 d & g	P 8.4	"
<i>Triticites jemezensis</i> n. sp.	6 (vial)	101116 d	P 11.0	Top Magdalena fm. Jemez Springs, N. Mex.
"	2 (slide)	101116 a & b	P 11.2	"
"	3 (slide)	101116 c	P 11.4	"
<i>Triticites kellyensis</i> n. sp.	2 (slide)	101112 e & f	P 21.1	Upper Magdalena; Kelly, N.M.
"	1 (slide)	101112 g	P 21.2	"
"	2 (slide)	101112 a & c	P 21.3	"
"	2 (slide)	101112 b & d	P 21.4	"
<i>Triticites rhodesi</i> n. sp.	1 (box)	101122 c	P 31.0	Upper Magdalena, Rhodes Canyon, Socorro Co., N. M.
"	1 (slide)	101122 a	P 31.1	"
"	1 (slide)	101122 b	P 31.3	"
<i>Triticites ventricosus</i> var. <i>sacramentoensis</i> n. var.	2 (vial)	101111 a & b	P 5.0	Up. Magdalena, La Luz, Otero Co., N. Mexico
"	1 (slide)	101111 d	P 5.2	"
"	2 (slide)	101111 c & e	P 5.3	"
<i>Triticites wellsii</i> n. sp.	2 (slide)	101114 c & e	P 23.1	Magdalena fm. Barton, Santa Fe County, New Mexico
"	1 (slide)	101114 f	P 23.2	"
"	1 (slide)	101114 b	P 23.3	"
"	2 (slide)	101114 a & d	P 23.4	"

TABLE 2—Specimens that were illustrated in Bulletin 14 that are still lost.

Name	Collector's number	Source
<i>Staffella atokensis</i> (?)	P 38.2, P 39.2	Lower Magdalena Fm., Kingston, NM
<i>Ozawainella</i> sp.	P 48.2	Valle de Ojo de la Parida, Socorro Co., NM
<i>Fusulina euryteines</i>	P 37.1, P 37.2	Sangre de Cristo Mts.; 15–20 mi east of Taos, NM
<i>Fusulina pattoni</i>	P 15.0, P 15.2	Hermosa Fm., Archuleta Co., CO
<i>Fusulina socorroensis</i>	P 16.2	Lower Magdalena Fm., Socorro Mts., Wand, NM
<i>Wedekindellina euthysepta</i>	P 37.1, P 37.2, P 22.1	Montezuma Hot Springs, San Miguel Co., NM
<i>Wedekindellina excentrica</i>	P 22.3, P 22.4, P 22.6, P 22.7	Tijeras Canyon
<i>Triticites nebraskensis</i>	P 33.3	North end of Sierra Los Pinos, 6 mi southeast of Scholle, Socorro Co., NM
<i>Triticites ventricosus</i>	P 9.3, P 2.0, P 2.1, P 2.4	Cedro Canyon, Manzano Mts. Alamogordo, NM
<i>Triticites kellyensis</i>	P 11.0, P 11.8	Jemez Springs in Jemez Mts., NM
<i>Triticites</i> sp. A	P 20.3	Coyote Hills, Socorro Co., NM
<i>Triticites rhodesi</i>	P 31.2	Upper Magdalena Fm., Rhodes Canyon, Socorro Co., NM
<i>Schwagerina emaciata</i>	P 1.000, P 1.23	Jarilla Mts., about 4 mi north of Orogrande, Otero Co., NM
<i>Schwagerina huecoensis</i>	P 32.7, P 32.8	About 2 mi northeast of Hueco Tanks, El Paso Co., TX
<i>Pseudoschwagerina fusulinoides</i>	P 32.0, P 32.4, P 32.5, P 32.6	Near Hueco Tanks, El Paso Co., TX
<i>Pseudoschwagerina uddeni</i>	P 32.00, P 32.1, P 32.2	Near Hueco Tanks, El Paso Co., TX
<i>Polydiexodina guadalupensis</i>	P 13.0, P 13.1, P 13.2, P 13.3, P 13.4	Guadalupe Point, TX

Mountains, as "cotypes" of the new species (p. 36). P 21.3, P 21.4, P. 11.00, and P 11.8, all of which were illustrated in Bulletin 14, were found at a locality near Jemez Springs in the Jemez Mountains. However, P 11.00 and P 11.8 were not sent to the U.S. National Museum (Table 2).

Cotypes of *Triticites rhodesi* are listed in Bulletin 14 (p. 45) as including numbers P 31.0, P 31.1, P 31.2, and P 31.3; however, Needham only sent P 31.0, P 31.1, and P 31.3 to the USNM.

Polydiexodina guadalupensis was a new species described in Bulletin 14 (pp. 58–59) with cotypes listed as P 13.0, P 13.1, P 13.2, P 13.3, and P 13.4. P 13.0, P 13.3, and P 13.4 were illustrated in the text. However, none of these specimens are shown on Needham's list to Henbest (Table 1).

The rediscovery of a portion of Needham's fusulinid collections is encouraging. We are very grateful to F. J. Collier for his efforts to locate the U.S. National Museum holdings and for providing copies of related correspondence. It is not impossible that the remaining specimens are in collections elsewhere and may yet be retrieved. We urge any readers of this article with knowledge of Needham's collections to contact us.

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views and suggestions by Sam Thompson, III, and Roy Foster.

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