

OBITUARY

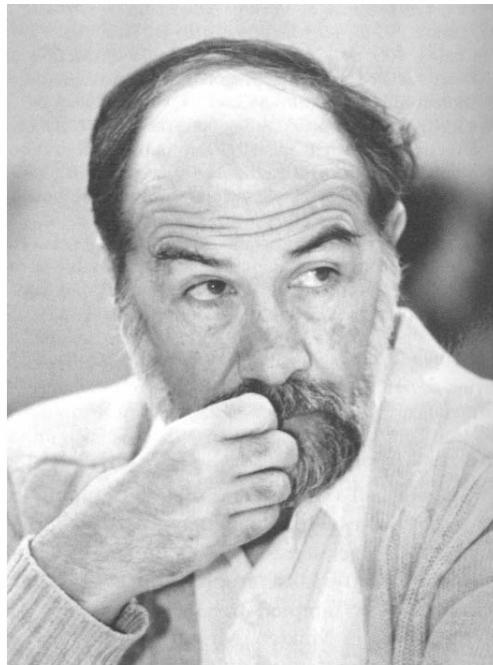
JOSÉ TICUL ÁLVAREZ SOLÓRZANO: 1935–2001

José Ticul Álvarez Solórzano, born in Mexico City on 26 February 1935, was the only son of Felisa Solórzano Dávalos, a nurse, and José Álvarez del Villar, an ichthyologist. His first studies were at Salesiano College, where he clearly showed his abilities for drawing and natural sciences. During his younger years, Ticul spent his holidays working as an overseer at a ranch that raised bulls for the “corridas” (bullfights). This was the formative period, when he gained his love for mammals and fieldwork.

He started his career in biology at the National School of Biological Sciences of the National Polytechnic Institute (Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional [ENCB]) in 1954. As a student, he started the mammalian collection at the institute, which would later become one of the most important collections in Mexico. During this period, he also worked at the National Autonomous University of Mexico and in the office of the General Director of Hunting under the National Secretary of Agriculture and Grazing (Dirección General de Fauna Silvestre, Secretaría de Agricultura y Ganadería). He published his first 2 papers in 1958–1959, while still an undergraduate.

Teresa García, one of his bachelor's degree classmates, recalls,

During the time that we were students, we liked to collect plants in different areas of the northern Valley of Mexico. One time, a student one year behind us, asked if he could join us on our trips. He was interested in camping and setting mousetraps. No one else in the group was interested in mammals, and less so in animal fieldwork. I do not remember to which place we went on that occasion, but Ticul arrived with his mousetraps and skinning kit. In the afternoon, he set his traps. The next day, before anyone else got up, he recovered the traps, and began to skin the specimens in one corner of our camp. He did not ask anybody for help, but as each of us woke up, we went to see what Ticul was doing. He began to teach us the technique for skinning



Ticul Álvarez at a seminar in the National School of Biological Sciences (ENCB).

mice. Soon, everybody was enthusiastically helping the younger student. The situation was so magical. Ticul changed a field trip in botany to a biological survey, including plants, mammals, and Ticul collecting fleas, as well. The enthusiasm that he brought to that trip, and the ways to integrate other sciences into a survey and not just a field trip, continued through the years. On these early trips, we collected the first specimens of the Mammals Collection of the ENCB.

In 1959, he married M. Rebeca Castañeda and presented his bachelor's thesis, “Catalog and Key of Mexican Rodents” (Catálogo y claves de los roedores Mexicanos). On the basis of this work, he was invited by E. Raymond Hall to the University of Kansas to obtain a master's de-



Ticul Álvarez on his last field trip to La Míchila, Durango, Mexico, in about 1978.

gree, culminating in his thesis, "The Recent Mammals of Tamaulipas, Mexico," in 1962.

That year he returned to Mexico and began working part-time in the Department of Prehistory at the National Institute of Anthropology and History (Departamento de Prehistoria, Instituto Nacional de Antropología e Historia [INAH]) under the direction of the archaeologist José Luis Lorenzo on studies of the environment of Mexican archaeological sites. His work in the field of archaeozoology and paleontology was pioneering, founding archaeozoology in Mexico and creating the only reference collection of this type in Mexico. He was an employee of the INAH until 1985, but he continued going to the laboratory for research with and direction of students, until physical disability prevented this activity.

At the INAH, he worked with one of his students, Fernando Sánchez, who remembers,

I had the opportunity to know Ticul Álvarez as my professor, working companion, and friend. We made many field trips together, he as a zoologist and me as a botanist, but his point of view always was the center of the work. This love for his work always was extraordinary, and I believe that this love was the cause of his continued development of his professional responsibilities, teaching, and advising students, until the loss of his eyesight.

Ticul was a meticulous critic and perfectionist, qualities he tried to transmit to his students, with the intention of maintaining high standards of research. Because of this characteristic, some people thought that he was a gruff person, but he was always looking for ways to improve the projects.

For more than 30 years, we worked together and had a strong friendship, even with its ups and downs. To us, lunch on Thursdays was like religion, and we talked about science, politics (but not always with the same point of view), music, and family matters. I need to confess that for nearly 1 year after his death, every Thursday I had the impulse to go to his laboratory to take him to lunch, enjoy the chatting, and have one good glass of vodka.

I lament not knowing him early in my life because I felt deprived of participating in a great part of his education and friendship. Of one thing I am sure, his was an intimate friendship. And a strong hug, my friend!

From 1962 to 1965, he was Curator with Bernardo Villa of the Mammals Collection of the Biology Institute of the National Autonomous University of Mexico (Instituto de Biología, Universidad Nacional Autónoma de México).

Beginning in 1964, he served as a professor of the ENCB in collaboration with his father, at that time in the Laboratory of Hydrobiology (now the Laboratory of Chordata), and continued his great project of building a Mexican mammalian collection of the highest standards (building it to 42,200 specimens). In addition, he developed a herpetological collection (17,000 specimens) and a small bird collection (1,500 specimens). At the ENCB, he produced a great part of his scientific work in mammal, amphibian, and reptilian studies and prepared many taxonomists in this field. He continued to work at the ENCB until his death in 2001.

Two of his last students were Nansy Sánchez and Jorge Villalpando.

In February 1992, we were providing social services in the Terrestrial Chordates Laboratory of the National School of Biological Sciences of the National Polytechnic Institute, where we met "Maestro" Ticul Alvarez. During the first days, we were working with owl pellets, skinning specimens, and identifying specimens. Between April and May, something was concerning Maestro Ticul, so he did not give any attention to our work. In his style, he would arrive in the morning, always at the same time, say "buenos," get a cup of coffee, and go to his office. Later, he would make a round through the laboratory, the collection area, and near the area where we were

working. He never said anything, but he always knew what was happening. He never made a comment in the identification of the specimens that we were studying, but we knew if we were right or wrong by the expression on his face. One day we were working with bats (How can we forget our first day with the genus *Glossophaga*!), and were arguing about the different and peculiar characteristics of a species. Without seeming to pay attention, Maestro Ticul, was near us and asked, "What species is it?" We looked at each other, and with a broken voice, we gave the characteristics that we saw and which species we thought it was. At that moment, he was sitting near us with his coffee mug and said, "OK, you know it." From that day until he went to the hospital for the last time, we always worked together in the "identification session." In these sessions, we would switch from identification of the species to natural history of the species, history, politics, music, and soccer scores. At this moment, with great love, we acknowledge how much we learned, not only in science and general culture, but also as persons.

Between 1971 and 1976, Ticul worked as the assistant director in the office of the General Director of Wildlife (Fauna Silvestre), with the goal of making better use of and protecting the wildlife resources of Mexico. Here, he began studies for the sustainable use of natural resources.

In 1980, he lost his sight after a lifetime's struggle with diabetes, but this physical incapacity did not stop his spirit, and he continued working. He demonstrated that, with help, many things could be accomplished. He was a shining example to many of his students. More than half of his publications were written after he lost his sight.

He was a researcher and a professor all his adult life. In 1983, he was admitted to the National Research System (Sistema Nacional de Investigadores), Mexico's unique national organization of scientists, at level III, the highest level in the system, and continued at level III over many evaluations.

In 1988, he received an award for scientific merit from the World Cultural Council, and the National Polytechnic Institute gave him the "Lázaro Cárdenas Award" for his meritorious ca-

reer at the Polytechnic. In 1989, he became Professor Emeritus and in 1994 received the Institute's "Juan de Dios Bátiz Award" for his years of service. In 1997, the American Society of Mammalogy elected him as an Honorary Member, its highest recognition for a career in mammalogy, and in the same year, the Instituto Nacional de Antropología e Historia published a book in his honor, *Homenaje al profesor Ticul Álvarez*. In 1999, the Southwestern Association of Naturalists gave him the "Robert L. Packard Outstanding Educator Award."

Michael Bogan came to the ENCB in Mexico City around 1980.

The way I remember the event is that I was in Mexico City for a meeting and to give a paper. During my visit, a couple of us went out to the "Poly" to see Ticul Álvarez and examine some *Myotis*. Ticul Álvarez's vision was quite bad by then, but we talked for some time and then I began examining *Myotis*. There was one specimen that I was unsure of and Ticul said to give him the skull. He took the skull, felt it carefully with his fingers, and then pronounced, "This is a *Myotis californicus*." He was absolutely right!

Over the years, he served as a technical advisor to the Natural History Museum in Mexico City (Museo de Historia Natural), to the Minister of Health and Public Assistance (Secretaría de Salubridad y Asistencia), to the Ecology Institute (Instituto de Ecología), and other federal agencies. He had been a professor of many subjects, but he always gave lectures on mammalogy and herpetology. During his last decades, he was a member of 12 scientific societies and was a founding member of 7. During his career, he participated in more than 20 research projects, supervised 30 theses, and wrote more than 132 scientific papers, book chapters, and books. His most important contributions were in mammalogy and herpetology, describing 22 species and subspecies of mammals, reptiles, and amphibians of the Recent and Pleistocene epochs. He has been recognized as one of the most productive researchers of vertebrates in Mexico.

Ticul Álvarez was meticulous, critical, and a perfectionist. He tried to transmit these qualities to students and friends, with the belief that this attitude can be applied to day-to-day life as well as research. He had a very forceful manner, but was always open to helping students and friends.

I always will remember him as a father and teacher but equally as my colleague and friend.

BIBLIOGRAPHY

1958

- Roedores colectados en el territorio de la Baja California. *Acta Zoológica Mexicana* 2(8):1–7.

1959

- El borrego cimarrón se extingue. *Yoliliztli* 2: 26–29.

1961

- Sinopsis de las especies mexicanas del género *Dipodomys*. *Revista de la Sociedad Mexicana de Historia Natural* 21:391–424.
- A new species of mouse (*Peromyscus*) from northwestern Veracruz, México. *Proceeding of the Biological Society of Washington* 74:203–205 (with E. R. Hall).
- A new subspecies of pocket gopher (*Heterogeomys*) from northern Veracruz. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 10:121–122 (with E. R. Hall).
- Sinopsis de las ardillas arbóreas del género *Sciurus* en México (Mamm. Sciuridae). *Anales de la Escuela Nacional de Ciencias Biológicas*, México 10:123–148.
- A new subspecies of the black *Myotis* (bat) from eastern Mexico. University of Kansas Publications, Museum of Natural History 14(4):69–72 (with E. R. Hall).
- Taxonomic status of some mice of the *Peromyscus boylii* group in eastern Mexico, with description of a new subspecies. University of Kansas Publications, Museum of Natural History 14(7):111–120.

1962

- A new subspecies of ground squirrel (*Spermophilus spilosoma*) from Tamaulipas, México. University of Kansas Publications, Museum of Natural History 14(8):121–124.
- Taxonomic status of the free-tailed bat, *Tadarida yucatanica* Miller. University of Kansas Publications, Museum of Natural History 14(9):125–133 (with J. K. Jones, Jr.).
- A new subspecies of wood rat (*Neotoma*) from northeastern Mexico. University of Kansas Publications, Museum of Natural History 14(11):139–143.
- Noteworthy mammals from Sinaloa, Mexico. University of Kansas Publications, Museum of Natural History 14(12):145–159 (with J. K. Jones, Jr. and M. R. Lee).

1963

- The Recent mammals of Tamaulipas, México. University of Kansas Publications, Museum of Natural History 14(15):363–473.
- Restos de mamíferos encontrados en una cue-

va de Valle Nacional, Oaxaca, México. *Revista de Biología Tropical* 11:57–61.

- Nueva especie de *Archaeolagus* (Leporidae) basada en restos procedentes de Sonora, México. *Acta Zoológica Mexicana* 6(5):1–4.
- The type locality for *Nyctomyssumichrasti* Saussure. *Journal of Mammalogy* 44:582–583.

1964

- Notas acerca de algunas especies mexicanas de ardillas del género *Sciurus* (Rodentia: Sciuridae). *Revista de la Sociedad Mexicana de Historia Natural* 24:33–39 (with C. E. Aviña).
- Additional records of mammals from the Mexican State of San Luis Potosí. *Journal of Mammalogy* 45:302–303 (with J. K. Jones, Jr.).
- Nota sobre restos óseos de mamíferos del Reciente encontrados cerca de Tepeapulco, Hidalgo, México. *Publicaciones del Departamento de Prehistoria, Instituto Nacional de Antropología e Historia*, México 15:1–15.
- The amphisbaenid lizard *Bipes canaliculatus* in Michoacán, México. *Herpetologica* 20:202.

1965

- Baedon allenii*, *Rhogeessa tumida major* and *R. p. parvula* newly reported for Michoacan, with notes on the qualitative differentiation of the two Rhogeessas. *Southwestern Naturalist* 10: 75–76 (with C. E. Aviña).
- Nuevos registros en México de la familia Molossidae. *Revista de la Sociedad Mexicana de Historia Natural* 25:243–254 (with C. E. Aviña).
- Description of a new species of fossil *Baiomys* from the Pleistocene of Central Mexico. *Acta Zoológica Mexicana* 7(4):1–4 (with R. L. Packard).
- Catálogo Paleomastozoológico Mexicano. *Publicaciones del Departamento de Prehistoria, Instituto Nacional de Antropología e Historia*, México 17:1–70.
- Notes on bats from the Cape region of Baja California. *Transactions of the San Diego Society of Natural History* 14:53–56 (with J. K. Jones, Jr. and J. D. Smith).

1966

- Reporte del Laboratorio de Paleozoología del INAH. In Un Tlamanalli encontrado en Tlatelolco (J. Angulo V., ed.). *Publicaciones del Departamento de Prehistoria, Instituto Nacional de Antropología e Historia*, México 18:45–46.
- Variación y descripción de una subespecie de *Bipes caniculatus* [sic] (Reptilia; Squamata) de Michoacán, México. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 13: 145–152.
- Roedores fósiles del Pleistoceno del Tequesquinalhua, Estado de México, México. *Acta Zoológica Mexicana* 8(3):1–16.

1967

29. La fauna Cinegética de México. Pp. 3–14 in Mesas Redondas sobre problemas de Caza y Pesca deportivas en México. Instituto Mexicano de Recursos Naturales Renovables, A.C., Mexico.
30. New records of fossil marsupials from the Pleistocene of Mexico. Texas Journal of Science 19:107 (with I. Ferrusquia-V.).
31. Redescubrimiento de algunos tipos de murciélagos mexicanos que se suponían perdidos. Revista de la Sociedad Mexicana de Historia Natural 27:191–197.
32. New records of *Cryptotis mayensis* from the Yucatan Peninsula, Mexico. Southwestern Naturalist 12:204–205 (with A. Martínez-G.).
33. El Laboratorio de Paleozoología. Boletín Instituto Nacional de Antropología e Historia, México 28:43–47.
34. Descripción de una nueva especie de *Pseudoeurycea* de Oaxaca, México (Amphibia: Caudata). Acta Zoológica Mexicana 9(1):1–9 (with E. Martín).
35. Zitácuaro, Michoacán, una localidad más norteña para *Dermophis multiplicatus oaxacae* (Amphibia: Caeciliidae). Acta Zoológica Mexicana 9(2):1–4 (with E. Martín).

1968

36. Estudio de los restos óseos de Tepeapulco, Hidalgo. Pp. 73–90 in Materiales para la Arqueología de Teotihuacan (J. L. Lorenzo, ed.). Servicios de Investigación. Instituto Nacional de Antropología e Historia, México 17:1–90.

1969

37. Restos fósiles de mamíferos de Tlapacoya, Estado de México (Pleistoceno-Reciente). In Contributions in mammalogy: a volume honoring Professor E. Raymond Hall (J. K. Jones, Jr., ed.). Miscellaneous Publications, University of Kansas, Museum of Natural History 51: 93–112.
38. Contribución al conocimiento de la Osteología apendicular de *Bipes* (Reptilia: Amphisbaenidae). Anales de la Escuela Nacional de Ciencias Biológicas, México 17:189–225 (with M. R. Castañeda).
39. Notas sobre una colección de mamíferos de la región costera del Río Balsas entre Michoacán y Guerrero, México. Revista de la Sociedad Mexicana de Historia Natural 29:21–35.
40. Descripción de una nueva subespecie de *Spermophilus adocetus* (Rodentia, Sciuridae) de Michoacán, México, y estado taxonómico de *S. a. arceliae* (Villa R., 1942). Revista de la Sociedad Mexicana de Historia Natural 29: 181–189 (with J. Ramírez-Pulido).

1970

41. Análisis polínico del contenido gástrico del murciélagos *Glossophaginae* de México. Anales de la Escuela Nacional de Ciencias Biológicas, México 18:137–165 (with L. González-Quintero).

1971

42. Variación de la figura oclusal del premolar inferior en carpichos fósiles (Rodentia: Hydrochoeridae) de Jalisco México. Instituto Nacional de Antropología e Historia, México 21: 1–35.

1972

43. Notas sobre los murciélagos del género *Leptonycteris* en México, con la designación del lectotipo de *L. yerbabuenae* Martínez y Villa 1940. Southwestern Naturalist 16:249–259 (with J. Ramírez-Pulido).
44. Nuevo registro para el vampiro del Pleistoceno *Desmodus stoki* [sic] de Tlapacoya, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 19:163–165.
45. Notas acerca de murciélagos Mexicanos. Anales de la Escuela Nacional de Ciencias Biológicas, México 19:167–178 (with J. Ramírez-Pulido).

1973

46. Notas sobre *Sceloporus mucronatus* [sic] (Reptilia: Iguanidae) de México. Anales de la Escuela Nacional de Ciencias Biológicas, México 20:177–184 (with P. Huerta).

1974

47. Los enemigos del Borrego cimarrón. Bosque y fauna, II época 11(3):43–47.
48. Zoogeografía de los vertebrados de México. Pp. 219–302 in El Escenario Geográfico. SEP-Instituto Nacional de Antropología e Historia, México, México, D.F., Mexico (with F. de Lachica).

1975

49. Restos óseos de anfibios y reptiles en Tlapacoya [sic] México. Boletín Instituto Nacional de Antropología e Historia, México 11:37–42 (with P. Huerta).

1976

50. Restos óseos animales de las Cuevas del Texcal y Tepeyolo, Puebla, México. Cuaderno de Trabajo, Departamento de Prehistoria, Instituto Nacional de Antropología e Historia, México 12:1–55.
51. Análisis polínico del contenido gástrico de murciélagos. Pp. 147–150 in Problemas de Investigación en Zoología (J. Álvarez del Villar, coord.). Compañía editorial Continental, México, D.F., Mexico.
52. Análisis Z-58 (Apéndice II). P. 117 in La estratigrafía arqueológica de Villa de Reyes, S. L. P. Un sitio en la frontera de mesoamérica (B. Braniff C., ed.). Cuaderno de los Centro

- de Trabajo, Instituto Nacional de Antropología e Historia 17:1–117.
53. Possible intraspecific sympatry in the lizard species *Sceloporus torquatus*, and its relationship with *S. cyanogenys*. Transactions of the Kansas Academy of Sciences 77:219–224 (with H. M. Smith).
 54. Restos óseos de la primera excavación de Santa Martha Chiapas (Cala A/B). Pp. 17–23 in Excavaciones en el abrigo de Santa Marta Chis. (1974). Serie Informes, Departamento de Prehistoria, Instituto Nacional de Antropología e Historia 1:1–140.
 55. Identificación de los huesos rescatados en la segunda temporada en Santa Martha Chiapas (Cala HH/KK). Pp. 24–29 in Excavaciones en el abrigo de Santa Marta Chis. (1974). Serie Informes, Departamento de Prehistoria, Instituto Nacional de Antropología e Historia 1:1–140.
 56. Restos óseos de las excavaciones de Tlatilco, Estado de México. Cuaderno de Trabajo, Departamento de Prehistoria, Instituto Nacional de Antropología e Historia, México 15:1–18.
 57. Restos óseos rescatados del Cenote Sagrado de Chichen-Itza, Yucatán, México. Cuaderno de Trabajo, Departamento de Prehistoria, Instituto Nacional de Antropología e Historia, México 15:19–39.
 58. Status of desert bighorns in Baja California. Pp. 18–21 in The Desert Bighorn Council 1976 transactions (C. Douglas, R. Valdez, W. Montoya, and T. O. Farrell, eds.). Desert Bighorn Council.
- 1977
59. Fauna Terrestre. Pp. 409–432 in Recursos Naturales de la Cuenca del Papaloapan, Tomo I (J. L. Tamayo and E. Beltrán, eds.). Instituto Mexicano de Recursos Naturales Renovables, Mexico City, D.F., Mexico.
 60. Nuevo registro de *Crotalus atrox* para la Península de Baja California. Revista de la Sociedad Mexicana de Historia Natural 35:113–115 (with P. Huerta).
 61. Colección de Anfibios y Reptiles del Noroeste de Chihuahua, México. Revista de la Sociedad Mexicana de Historia Natural 35:117–142 (with P. Domínguez and P. Huerta).
- 1980
62. Nuevos registros de murciélagos para el Estado de Hidalgo, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 23: 135–143 (with O. J. Polaco).
 63. Efectos de la contaminación y cambios ambientales sobre la fauna silvestre en México. Pp. 105–114 in Memorias del Simposio sobre Problemas Ambientales en México, Mexico City, D.F., Mexico.
- 1981
64. Fauna obtenida de las excavaciones realizadas en el sitio Rancho La Amapola-El Cedral, S.L.P. Pp. 123–124 in El poblamiento de América. Evidencia de ocupación humana en América anterior a 11.500 años a. p. (A. Bryan, coord.). Unión Internacional de Ciencias Prehistóricas y Protohistóricas.
 65. Análisis del material zoológico de las excavaciones en Toniná, Chis. Pp. 1127–1142 in Tonina un cite maya du Chiapas (Mexique) (P. Béquelin and C. F. Baudez, eds.). Collection Etudes Mésoaméricaines. Mission Archéologique et Ethnologique Française au Mexique. Editions Recherche sur les Civilisations 6:543–1192.
- 1982
66. A new species of the genus *Lepidophyma* (Sauria: Xantusiidae) from Michoacán, México. Herpetologica 38:361–366 (with R. L. Bezy and R. G. Webb).
 67. Restos de vertebrados terrestres en la ofrenda 7 y conclusiones. Pp. 161–172 in El Templo Mayor: excavaciones y estudios. Instituto Nacional de Antropología e Historia, México, D.F., Mexico.
 68. Relación del material identificado de la ofrenda 7. Pp. 173–184 in El Templo Mayor: excavaciones y estudios. Instituto Nacional de Antropología e Historia, México, D.F., Mexico (with E. Díaz P. and O. J. Polaco).
- 1983
69. Restos óseos animales localizados en las excavaciones. Pp. 61–75 in Laguna de las Cruces, Salinas, S.L.P. Un sitio paleontológico del Pleistoceno final (L. Mirambell, coord.). Colección Científica, Instituto Nacional de Antropología e Historia México 128:1–95.
 70. Micofagia en la rata montera *Neotoma mexicana* (Mammalia, Rodentia). Boletín de la Sociedad Mexicana de Micología 17:114–119 (with O. J. Polaco, G. Guzmán, and L. Guzmán D.).
 71. Restos pleistocénicos de dos especies de *Microtus* (Rodentia: Muridae), del norte de San Luis Potosí, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 26:47–53 (with O. J. Polaco).
 72. Crecimiento y desarrollo en el laboratorio de *Neotomodon alstoni* (Rodentia: Cricetidae). Anales de la Escuela Nacional de Ciencias Biológicas, México 26:55–84 (with E. Martín F.).
 73. Restos de mamíferos Recientes y Pleistocénicos procedentes de las Grutas de Loltún, Yucatán México. Pp. 7–35 in Restos de moluscos y mamíferos cuaternarios procedentes de Loltún, Yucatán (T. Álvarez and O. J. Polaco, eds.). Cuaderno de Trabajo, Instituto Nacional de Antropología e Historia, México 26:1–41.
 74. Estudio de una colección herpetofaunística de la costa de Michoacán, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 27:129–147 (with E. Díaz-Pardo).
 75. Notas sobre algunos roedores fósiles del pleistoceno en México. Anales de la Escuela Na-

- cional de Ciencias Biológicas, México 27: 149–163.
- 1984
76. Mamíferos de la Angostura, región central de Chiapas, México. Cuadernos de Trabajo, Departamento de Prehistoria, Instituto Nacional de Antropología e Historia, México 24:1–89 + x (with P. Domínguez and J. Arroyo-C.).
 77. Herpetofauna de La Michilí, Durango. Anales de la Escuela Nacional de Ciencias Biológicas, México 28:73–97 (with O. J. Polaco).
 78. Estudio de los mamíferos capturados en la Michilí, sureste de Durango, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 28:99–148 (with O. J. Polaco).
- 1985
79. Los Mamíferos. In Francisco Hernández Obras completas: comentarios a la obra de Francisco Hernández (Comisión editora de las obras de Francisco Hernández). Universidad Nacional Autónoma de México 7:229–236.
- 1986
80. Fauna pleistocénica. In Tlapacoya: 35,000 años de historia del Lago Chalco (J. L. Lorenzo and L. Mirambell, eds.). Colección Científica, Instituto Nacional de Antropología e Historia, México 155:174–204.
- 1987
81. Mamíferos (excepto Chiroptera) de la costa de Michoacán, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 31:13–62 (with J. Arroyo-Cabral and M. González E.).
 82. Nomenclatura específica de los Equidae del Pleistoceno de México. Anales de la Escuela Nacional de Ciencias Biológicas, México 31: 125–132 (with A. Ocaña).
- 1988
83. Atlas Cultural de México: fauna. Secretaría de Educación Pública, Instituto Nacional de Antropología e Historia, Grupo Editorial Planeta 9:1–187 (with M. González-E.).
 84. Descripción de una nueva especie de *Lepidophyma* (Reptilia: Xantusiidae) de Chiapas, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 32:123–130 (with N. Valentín).
 85. Estudio de las madrigueras de la rata magueyera, *Neotoma mexicana* (Rodentia), en la reserva de la biosfera La Michilí, Durango, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 32:131–154 (with J. C. López-Vidal and O. J. Polaco).
- 1989
86. Los topotipos de mamíferos como indicadores ecológicos. Pp. 212–230 in Memoria Segundo Simposium Internacional de Vida Silvestre, Acapulco, Guerrero. The Wildlife Society and Secretaria de Desarrollo Urbano y Ecología, México, D.F., Mexico (with M. González-Escamilla).
 87. Variación osteométrica de *Marmosa* (Didelphidae: Marsupialia) del Reciente y Pleistoceno de Yucatán, México, con descripción de una nueva especie. In Homenaje José Luis Lorenzo (L. Mirambell, coord.). Colección Científica, Instituto Nacional de Antropología e Historia, México 188:333–345 (with J. Arroyo-Cabral).
- 1990
88. Restos óseos de murciélagos procedentes de las excavaciones en las Grutas de Loltún. Colección Científica, Instituto Nacional de Antropología e Historia, México 194:1–103 (with J. Arroyo-Cabral).
 89. Cuatro nuevos registros de murciélagos (Chiroptera) del Estado de Chiapas, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 33:157–161 (with S. T. Álvarez-Castañeda).
 90. Cuatro nuevos registros del ratón de campo *Peromyscus* (Rodentia: Muridae) en el Estado de México, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 33: 163–173 (with J. J. Hernández-Chávez).
 91. Cálculo de captura, densidad y ámbito hogareño de tres especies de roedores en una área de influencia humana en el sureste de Durango, México. Anales de la Escuela Nacional de Ciencias Biológicas, México 33:185–210 (with J. Arroyo-Cabral).
 92. Identificación de los restos óseos procedentes de las excavaciones de Tonina, Chiapas. Pp. 1832–1846 in Tonina une cité Maya du Chiapas (P. Béquelin and F. Taladoire, eds.). Collection Etudes Mesoaméricaines 4 (with A. Ocaña and N. Valentín-M.).
 93. Adenda a la descripción de *Marmosa lorenzoi* del Pleistoceno de México. Revista de la Sociedad Mexicana de Paleontología 3:137 (with J. Arroyo-Cabral).
- 1991
94. Los murciélagos de Chiapas. Instituto Politécnico Nacional, México, D.F., Mexico (with S. T. Álvarez-Castañeda).
 95. Notas sobre el estado taxonómico de *Pteronotus dayi* en Chiapas y de *Hylonycteris* en México (Mammalia: Chiroptera). Anales de la Escuela Nacional de Ciencias Biológicas, México 34:223–229 (with S. T. Álvarez-Castañeda).
 96. Restos óseos de vertebrados terrestres de las ofrendas del Templo Mayor, Ciudad de México. Pp. 105–148 in La Fauna en el Templo Mayor (O. J. Polaco, ed.). Colección de Divulgación, Instituto Nacional de Antropología e Historia, México, D.F., Mexico (with A. Ocaña).
 97. Notas sobre la dieta alimenticia del murciélagos pescador *Noctilio leporinus* (Mammalia: Chi-

- roptera). *Anales de la Escuela Nacional de Ciencias Biológicas*, México 35:123–127 (with M. Aguilar-Cervantes).
98. Análisis de la fauna de roedores del área de El Cedral, San Luis Potosí, México. *Anales del Instituto de Biología, Universidad Nacional Autónoma de México, Serie Zoología* 62:169–180 (with S. T. Álvarez-Castañeda).
99. Variación intrapoblacional e interpoblacional de *Peromyscus melanotis* (Rodentia: Muridae) en el Eje Volcánico Transversal, México. *Acta Zoológica Mexicana* (nueva serie) 47:1–51 (with M. Martínez-Coronel and J. Ramírez-Pulido).
- 1992
100. La Herpetofauna de los Volcanes Popocatépetl e Iztaccíhuatl. *Acta Zoológica Mexicana* (nueva serie) 51:1–128 (with A. Vega-López).
- 1993
101. Apuntes sobre la variación, biología y poblaciones del axolote de montaña *Rhacosiredon leorae* (Amphibia: Ambystomatidae) en Río Frío, México. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 38:129–137 (with A. Vega-López).
102. Taxonomía del meteorito *Microtus mexicanus* en el Centro de México con la descripción de una nueva subespecie. Pp. 137–156 in *Avances en el Estudio de los Mamíferos de México* (R. A. Medellín and G. Ceballos, eds.). Publicación Especial, Asociación Mexicana de Mastozoología, A.C., México, D.F., Mexico (with J. J. Hernández-Chávez).
103. Biología de la rata montera *Neotoma mexicana*, en la Michilia, Durango, México. Pp. 185–196 in *Avances en el estudio de los mamíferos de México* (R. A. Medellín and G. Ceballos, eds.). Publicaciones especiales, Asociación Mexicana de Mastozoología, A.C., México, D.F., Mexico (with J. C. López-Vidal).
- 1994
104. Claves para murciélagos mexicanos. Centro de Investigaciones Biológicas del Noroeste, S.C. y Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, Mexico (with S. T. Álvarez-Castañeda and J. C. López-Vidal).
105. Contribución al conocimiento de los hábitos alimentarios del ratón de los volcanes, *Neotomodon alstoni* (Merriam, 1898). *Acta Zoológica Mexicana* (nueva serie) 59:1–51 (with E. Mayo-Aceves).
106. Estudio de los restos de *Neotoma* (Rodentia: Cricetidae) del pleistoceno-holoceno de Tlapacoya, Estado de México, México, con descripción de dos nuevos taxa. *Revista de la Sociedad Mexicana de Paleontología* 7:1–11 (with J. J. Hernández-Chávez).
107. Distribución y caracterización de *Peromyscus difficilis* (nuevo registro) y *P. maniculatus* (Rodentia: Cricetidae) en el estado de Michoacán, México. Facultad de Biología, Universidad Michoacana, San Nicolás de Hidalgo, México 2:102–114 (with A. Núñez-Garduño and C. Sánchez H.).
108. Identificación y análisis de restos animales procedente de excavaciones en San Luis Potosí. *Arqueología Revista de Coordinación Nacional de Arqueología*. Instituto Nacional de Antropología e Historia, Segunda Época 11 112:3–18 (with A. Ocaña).
- 1996
109. Etimologías de los géneros de mamíferos mexicanos. *Ciencia* 47:39–49 (with S. T. Álvarez-Castañeda).
110. Nuevo registro de *Ramphotyphlops braminus* (Daudin, 1803) (Reptilia: Typhlopidae) en Nuevo León México. *Vertebrata Mexicana* 2: 1–2 (with S. Murillo).
111. Descripción de una nueva subespecie de tuza *Cratogeomys goldmani* (Rodentia: Geomyidae), de San Luis Potosí, México. *Acta Zoológica Mexicana* (nueva serie) 68:37–43 (with S. T. Álvarez-Castañeda).
112. Aspectos ecológicos de los murciélagos de Ixtapan del Oro, Estado de México, México. Pp. 169–182 in *Contributions in Mammalogy: a memorial volume honoring Dr. J. Knox Jones, Jr.* (H. H. Genoways and R. J. Baker, eds.). Museum of Texas Tech University, Lubbock (with S. T. Álvarez-Castañeda).
113. New records of fossil tapir from northeastern Mexico. *Current Research in the Pleistocene* 13:93–95 (with J. Arroyo-Cabralles, O. J. Polaco, and E. Johnson).
- 1997
114. Notas sobre la dieta de *Hylonycteris* (Chiroptera: Phyllostomidae) en México. *Vertebrata Mexicana* 3:9–12 (with N. Sánchez-Casas).
115. Localidades típicas de mamíferos terrestres en México. Centro de Investigaciones Biológicas del Noroeste, S.C., La Paz, Baja California Sur, Mexico (with S. T. Álvarez-Castañeda and M. González-Escamilla).
116. Contribución al conocimiento de los Mamíferos, excepto Chiroptera y Rodentia, de Michoacán, México. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 42:47–74 (with N. Sánchez-Casas).
117. Notas sobre la alimentación de *Musonycteris* y *Choeronycteris* (Mammalia: Phyllostomidae) en México. *Revista Mexicana de Mastozoología* 2:113–115 (with N. Sánchez-Casas).
- 1998
118. Herpetofauna de Santiago Jalahui, Oaxaca, México. *Acta Zoológica Mexicana* (nueva serie) 75:17–45 (with A. Rendón R. and O. Flores-Villela).
119. La mastofauna de la región de Ticumán, Morelos, México. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 43:51–66 (with N. Sánchez-Casas and A. Ocaña).

1999

120. Báculo de *Eira barbara* (Carnívora: Mustelidae) de Ría Lagartos, Yucatán, México. *Vertebrata Mexicana* 6:7–9 (with N. González-Ruiz).
121. Familia Phyllostomidae. Pp. 77–135 in *Mamíferos del Noroeste de México* (S. T. Álvarez-Castañeda and J. L. Patton, eds.). Centro de Investigaciones Biológicas del Noroeste, La Paz, Baja California Sur, Mexico (with J. C. López-Vidal).
122. Registro de los movimientos de *Leptonycteris yerbabuena* en el centro de México. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 45:9–15 (with N. Sánchez-Casas and J. A. Villalpando).
123. Nota adicional sobre la dieta del murciélagos pescador *Noctilio leporinus* (Chiroptera: Notochilionidae) en los estados de Jalisco y Oaxaca, México. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 45:71–75 (with N. González-Ruiz).
124. Sinopsis de restos arqueozoológicos de vertebrados terrestres, basada en informes del laboratorio de paleozoología del Instituto Nacional de Antropología e Historia. Colección Científica, Instituto Nacional de Antropología e Historia, México, D.F., Mexico (with A. Ocaña).
125. Análisis de los restos óseos animales procedentes de Tehuacan Viejo, Puebla. Pp. 319–330 in *Arqueología, historia y antropología. In memoriam José Luis Lorenzo Bautista* (J. Litvak and L. Mirambell, coord.). Colección Científica, Instituto Nacional de Antropología e Historia, México, D.F., Mexico (with A. Ocaña).

2000

126. Notas sobre algunos nuevos registros de murciélagos del Estado de México, México. *Vertebrata Mexicana* 9:1–6 (with N. González-Ruiz and J. Navarro-Frías).
127. Palinofagia de los murciélagos del género *Glossophaga* (Mammalia: Chiroptera) en México. *Acta Zoológica Mexicana* (nueva serie) 81:23–67 (with N. Sánchez-Casas).
128. Familia Felidae. Pp. 759–776 in *Mamíferos del Noroeste Mexicano II* (S. T. Álvarez-Castañeda and J. L. Patton, eds.). Centro de Investigaciones Biológicas del Noroeste, La Paz, Mexico (with N. Sánchez-Casas).
129. Murciélagos (Chiroptera) de Michoacán en la colección de mamíferos de la Escuela Nacional de Ciencias Biológicas del Instituto Politécnico Nacional, México. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 46:119–188 (with J. A. Villalpando).
130. Variación geográfica de *Saccopteryx bilineata* (Chiroptera: Emballonuridae) en México y descripción de una nueva subespecie. *Anales de la Escuela Nacional de Ciencias Biológicas*, México 46:305–316 (with N. González-Ruiz).

2001

131. Nuevos registros de *Notiosorex crawfordi* (Insectívora: Soricidae) para México. *Acta Zoológica Mexicana* (nueva serie) 84:175–177 (with N. González-Ruiz).

2002

132. Aspectos ecológicos de la culebra *Thamophis scalaris* (Colubridae: Reptilia) de México. *Vertebrata Mexicana* 10:19–23 (with Sergio Murillo).

ACKNOWLEDGMENTS

I thank Fernando Sánchez and Hugh H. Genoways for helping me with the manuscript.

SERGIO TICUL ÁLVAREZ-CASTAÑEDA
Centro de Investigaciones Biológicas del Noroeste, S. C.
Apartado Postal 128
La Paz, Baja California Sur
C.P. 23090, Mexico
sticul@cibnor.mx