

American Museum Novitates

PUBLISHED BY THE AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK WEST AT 79TH STREET, NEW YORK, N. Y. 10024

NUMBER 2350

OCTOBER 4, 1968

Zoological Exploration in Mexico—the Route of Lieut. D. N. Couch in 1853

BY ROGER CONANT¹

Lieutenant Darius Nash Couch was an enthusiastic and productive naturalist who spent several months in Mexico during 1853, traveling under the aegis of the Smithsonian Institution. He assembled a considerable collection of vertebrates, many of which eventually became the types of new species, some named for him.

Kellogg (1932, pp. 6, 52), in his review of persons who collected amphibians for the United States National Museum, included a number of facts about Couch but stated that a report on Couch's expedition, although written, had never been published. Dr. Alexander Wetmore advised me (personal communication), while he was Secretary of the Smithsonian Institution, that neither field notes nor any detailed report by Couch had ever been found. Precise information on Couch's itinerary therefore is lacking, and persons who study his material are often confronted with the problem of trying to determine exactly where he worked in the field. A case in point was my own effort to pinpoint the type localities of several natricine snakes ascribed to him as collector. So many data were assembled in the process, however, that I was encouraged to reconstruct Couch's route in considerable detail. Publication of this information was originally intended for inclusion in a monographic study of the genus *Natrix* in Mexico, but Couch's travels probably will

¹ Research Associate, Department of Herpetology, the American Museum of Natural History; Director and Curator of Reptiles, Philadelphia Zoological Garden.

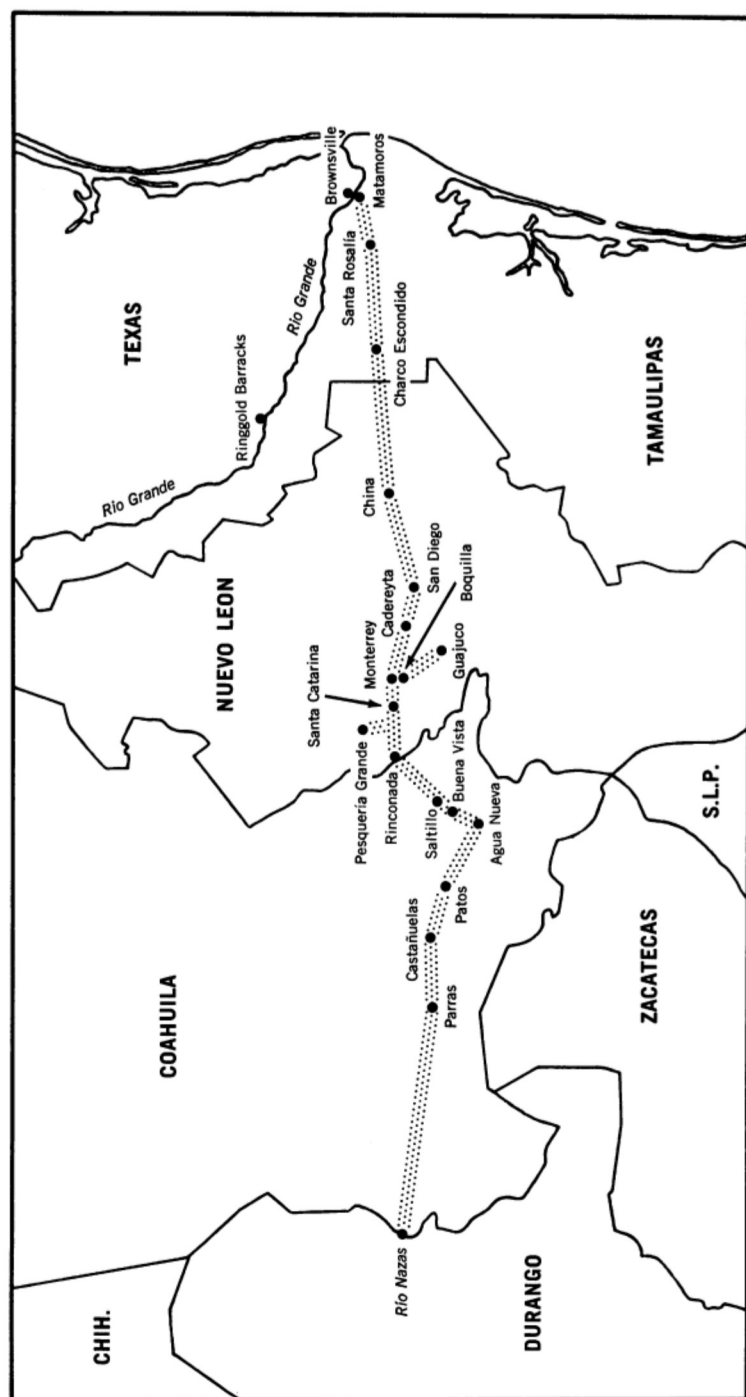


FIG. 1. Place names along the approximate route (stippled zone) followed by Couch across northeastern Mexico in 1853 indicate localities where he is known to have collected specimens.

be of interest to students of other disciplines, and it thus seems advisable to record them separately.

Couch was born at Southeast, Putnam County, New York, on July 23, 1822, and he graduated from the United States Military Academy in the class of 1846. He served in the war with Mexico and saw action in the Battle of Buena Vista near Saltillo, Coahuila, on February 22–23, 1847, where he was promoted “for gallant and meritorious conduct.” Undoubtedly it was his participation as a soldier in the field in Mexico that prompted him to return to that country on his own as a First Lieutenant on leave of absence from the United States Army. Couch resigned his commission in 1855 after serving at various forts and garrisons from Key West to Massachusetts and west to Kansas. He entered service again during the Civil War, became a Division Commander of the Union Army, and participated in several major engagements with distinction despite ill health. “During the Rebellion,” he said, “my well days were few in consequence of disease contracted during the Mexican War” (unpublished letter). Couch rose to the rank of Major General. He resigned May 26, 1865, and died at Norwalk, Connecticut, on February 12, 1897.

The biographical accounts (Cullum, 1868; Geiser, 1937; and Johnson and Malone, 1958), from which the facts stated above are derived, gave Couch’s leave of absence as “1853–1854” and implied that he was in Mexico during both years, but there is no evidence in the zoological literature, insofar as I can determine, to indicate that he visited Mexico during 1854. All dates on material he collected are for 1853. He was in Washington, on leave of absence during the early part of 1854, as is amply proved by handwritten letters preserved in the manuscript files of the Academy of Natural Sciences of Philadelphia and the archives of the Smithsonian Institution.

There are some 50 Couch letters in the latter collection, chiefly correspondence with Spencer Fullerton Baird of the Smithsonian Institution, which spans a period of nearly 20 years, beginning in 1852. The series is far from complete because numerous letters are obviously missing, and the copies of many of those from Baird are in large part illegible. (They were duplicated on wet tissues on an old-fashioned letterpress before carbon paper came into general use.) Nonetheless they constitute a valuable record supplying much background information on Couch’s interests and activities and corroborating numerous facts gleaned from other sources. By far the most pertinent to the subject of the present paper is a letter in which Couch outlined his general route, mentioned several of his stops, and indicated his terminal points (approximate in

the west). Evidently as a result of prompting by Baird, Couch wrote to him from Fort Leavenworth, Kansas, on January 30, 1855 (in part), as follows:

"You know that it is out of the question for me to write anything like an extended report that would be fit for publication, though nothing preventing you shall some time have a copy of what I have written.

"Here is a *species* of an epitome of my notes.

"I reached Brasos Santiago southwestern Texas January 21st 1853—from thence proceeded to Brownsville on the Rio Grande 28 miles distant and opposite Matamoros. One month was occupied here in making collections of Natural History, repacking and forwarding to the Smithsonian Inst the extensive collection of Dr. Berlandier a Swiss Savant of extensive research who died near Matamoros in 1851 having lived in that City for twenty years. With two pack mules & two mounted servants I crossed the River at Brownsville and struck west towards Monterey the Capital of Nuevo Leon—travelling at slow marches in order to gather information of the Country, its people, and fill my panniers with specimens in Natural History etc. After spending some time in examining the Sierras that lie south of Monterey as well as West I left for Parras in Coahuila nearly West and distant by my route 185 miles enriching my packs and note book with anything of interest that came in my way—Between Saltillo and Parras the people were in continual alarm from the incursions of Northern Indians, this state of things greatly impeded my labors. From Parras my journey was prosecuted still farther Westerly to the Plains of the lower Bolson de Mapimi. After exploring some celebrated caves used as tombs by the Ancient Mexicans—Having now lost my best servant and the other refusing to accompany me farther, I went to the salt plains of Alamo de Parras and then to Parras, from there returned to Monterey with the intention of going to the Huasteca country lying south of Tamaulipas. It became expedient to give up this journey and return to the United States. There Professor is the expedition & at your service."

While he was in the Brownsville-Matamoros area, Couch successfully negotiated for the purchase of the papers, herbarium, and zoological and mineral collections of Jean Louis Berlandier from the latter's widow. He shipped these to the Smithsonian Institution and, by making them available for study and sending part of the plant collection to Switzerland, helped to clear Berlandier's name. That Swiss botanist had married and settled in Matamoros where he earned a position of respect, but he fell into disrepute with some of his Swiss backers who severely criticized him (Geiser, 1937, p. 63; McKelvey, 1955, p. 366).

From the correspondence it is apparent that Couch purchased the Berlandier material with his personal funds. The price was not stated, but there are several comments about attempts to sell portions of the collection, and an acknowledgment of the receipt of \$400 as payment "in full for the botanical specs. of the 'Berlandier collection'" is among the Couch letters. There are indications that Baird tried to influence members of Congress to appropriate funds for the publication of the Berlandier manuscripts and to reimburse Couch for his expenses. Joseph Henry (1855, p. 15), Secretary of the Smithsonian Institution, expressed similar thoughts.

No evidence has come to hand indicating that Couch was involved in a railroad survey (as suggested by Kellogg, 1932, pp. 5, 52), boundary survey, or other work sponsored by the United States Government. He was on his own, as was clearly indicated by Henry (*loc. cit.*) who stated, "Lieutenant D. N. Couch, U.S.A., communicated to the Smithsonian Institution a proposition to make at his own expense a scientific exploration in the States of Mexico, adjoining the lower Rio Grande . . . it was commended by me in a letter to the Secretary of War, and a request made that Lieutenant Couch might have leave of absence for the purpose of carrying out his design. The request was granted, and this young officer soon embarked on his expedition."

Couch's plans concerning his route in Mexico were evidently nebulous to some extent, for as late as February 24, 1853, he wrote to Baird from Brownsville: "I am now about ready for the field—have some time been agitating in my mind the expediency of going South to Victoria and from thence into the valley beyond the Sierra Madre."

He abandoned this plan soon afterward, for in March he headed almost due west from Matamoros, as indicated on the map (fig. 1).

It is likely that Couch had no exact destination in mind other than the natural one of wishing to revisit the battlefield at Buena Vista, where he had served during the Mexican war. Baird must have been aware of this when he dispatched a letter to Couch at Saltillo on June 1, 1853: "Captain Van Vliet [of the garrison at Fort Brown near Brownsville] writes that he suggested to you a trip into Sonora. This if practicable would give most important results, especially if you penetrate to the Gulf of California. There are oceans of things over there. The peninsula of California would [word undecipherable] to you riches more than those of gold."

Couch, of course, stopped far short of these suggested destinations, as is confirmed in his letter of January 30, 1855, outlining the route he had followed. Although this account of his trip mentioned only a few

of the places where he worked in the field, information about many others fortunately is available from several sources. Among some of the journals in which his Mexican material was reported are tables of data that include localities and collectors' names and some dates. By searching these for "Lieut. Couch," as he was usually listed, and plotting them on a map (fig. 1), one can establish much of the detail of his route.

The most productive source proved to be the report on birds by Baird, Cassin, and Lawrence (1858), which appeared in one of the publications on the Pacific railroad surveys, and which also included many localities far afield from the exploration routes. Other data were obtained from Baird (1857 and 1859), Girard (1858 and 1859), Yarrow (1882), and the catalogue of the herpetological collection of the United States National Museum.

Dates were included in these reports and catalogues for only a few of the specimens listed, and even in such cases only the month was usually indicated. The dates appearing in the itinerary below are mainly from Baird, Cassin, and Lawrence (1858). I have not attempted to find additional dates by examining museum specimens that may have tags attached or stored with them. Also, I have not made an exhaustive search of the literature in the hope of finding additional localities, a task that would require an inordinate amount of time in proportion to the potential results.

There are many variations and errors in spelling in the several sources of information, "Santa Caterina" for "Santa Catarina," for example, and "Charo Escondido" for "Charco Escondido," but I have adjusted these to conform with current usage.

Most of Couch's collecting sites appear on modern road or topographic maps, and these are listed in the itinerary without comment, but others were found only after considerable research. One particularly valuable reference was a map of Mexico published by Disturnell (1853). Because of the limited and frequently erroneous information available to cartographers of the day, the Disturnell chart contains many inaccuracies and distortions, but it does show certain localities that I failed to find on numerous other maps, and it delineates many of the primitive roads of the time. When the Couch collecting stations are compared with this map, they fall into logical sequence along or close to what apparently was the main route from Matamoros to Monterrey to Saltillo to Parras. Couch may have carried an earlier edition of the Disturnell map (1847), or a similar one, into the field with him.

In the following itinerary the Couch localities are listed in geographical and (as far as possible) chronological order. Comments are included on the more obscure ones and those that are no longer known by the

names they bore more than a century ago. The practice of changing place names in Mexico has been widespread and has led to considerable confusion.

COUCH'S ITINERARY

BROWNSVILLE, TEXAS, FEBRUARY AND MARCH

MATAMOROS, TAMAULIPAS, MARCH 1

SANTA ROSALÍA, STATE NOT INDICATED, MARCH

VICTORIA, TAMAULIPAS, NO DATE

Couch, as a military man, may have established his headquarters at Fort Brown, near Brownsville, crossing back and forth into Matamoros and collecting near both settlements as he negotiated for the purchase of the Berlandier collection and prepared it for shipment to Washington. The March dates for both Brownsville and Matamoros indicate that he remained in their vicinity longer than the month mentioned in his letter. Many of Couch's specimens, designated simply as "Tamaulipas," were collected during March and April, and these may have been taken near Matamoros or on his way westward to Nuevo León. Santa Rosalía, according to Baird (1857, p. 714), was in "northeastern Mexico, west of Matamoros. Precise locality not ascertained." Santa Rosalía appears a short distance west of Matamoros on the Tamaulipas sheet (Secretaría de Agricultura y Ganadería, 1946), and it also is indicated approximately 27 kilometers west-southwest of Matamoros on sheet 11-II-(U) of the "Carta de la República Mexicana" (Secretaría de Estado, etc., 1904-1905). Victoria probably was a *rancho* or *hacienda* that is not shown on maps rather than the capital city of Tamaulipas, which is far to the south of any locality on Couch's route.

CHARCO ESCONDIDO, NUEVO LEÓN, MARCH AND MAY

This locality, according to Baird (1857, p. 422) was "24 leagues west of Matamoros" and (p. 706) "not far south of lat. 26." It appears on the Monterrey sheet (American Geographical Society of New York, 1937) at approximately latitude 25° 47' N. and about 12 miles east of the boundary of Nuevo León. Hence, Charco Escondido is in Tamaulipas, but on virtually a direct line between Matamoros and China, two of Couch's collecting sites. It is probable that boundaries were so poorly defined more than a century ago that Couch and his men were not sure in which state they were working. The May date probably is a typographical error (for "Mar."?), for it seems unlikely that Couch would have retraced his steps when he was much farther west during May.

Charco Escondido also appears on the Madre Lagoon sheet (United States Coast and Geodetic Survey, 1946).

CHINA, NUEVO LEÓN, MARCH

SAN DIEGO, NUEVO LEÓN, MARCH AND APRIL

The San Diego locality is qualified in several of the listings by "Río San Juan near Cadereyta." (The tributary of the Río San Juan on which Cadereyta is situated appears as the Río de Monterrey on recent maps.) According to sheet 11-III-(B) (Secretaría de Estado, etc., 1904-1905), San Diego is approximately 3.5 kilometers east-northeast of San Juan; the latter village appears on several modern maps downstream from Cadereyta. San Diego may have been larger when Couch visited there, but by the time García Cubas published his gazetteer in 1898 (vol. 5, p. 51) he listed its population as six persons.

CADEREYTA, NUEVO LEÓN, APRIL 18

MONTERREY, NUEVO LEÓN, APRIL AND MAY

SIERRA MADRE, NUEVO LEÓN, APRIL

BOQUILLA, NUEVO LEÓN, APRIL

GUAJUCO (= VILLA DE SANTIAGO), NUEVO LEÓN, NO DATE

Couch presumably continued westward through Cadereyta to Monterrey, where, as indicated in his letter to Baird, he explored the mountains to the south and west. Several specimens, listed simply as "New Leon," were obtained during the months of April and May. "Sierra Madre" probably refers to the eastern escarpment of the Mexican plateau and the associated mountains rather than to any specific locality. García Cubas (1898, vol. 1, p. 427) listed several Boquillas from Nuevo León, but only one, Boquilla y Chupaderos, a "*rancho de la municipalidad de Monterrey*," was close to that city. Two small settlements, Boquillas and Chupaderos, appear close together on sheet 11-III-(A) (Secretaría de Estado, etc., 1904-1905), 2 and 3 kilometers, respectively, south of Monterrey. These presumably were the same as García Cubas' "Boquilla y Chupaderos." All of his other Boquillas are at considerable distances from Couch's route, with the exception of one described as a "*congregación de la municipalidad de Allende*," but there is no evidence that Couch ventured so far south. It is probable, however, that he visited the Cola de Caballo (Horsetail Falls) somewhat farther north, a locality of outstanding interest that would be a lure for any naturalist working near Monterrey. According to Girard (1859, p. 44) one of his collecting stations was Guajuco (= Huajuco), a former name (García Cubas, 1898, vol. 5, p. 159) for the Villa de Santiago, the town near the entrance to

the gorge containing the falls. The name Huajuco still survives (American Automobile Association, 1967, pp. 234-235), as Huajuco Canyon, through which the Pan-American Highway passes north of the Villa de Santiago.

Girard (1859, p. 59) included "Acapulco, near Monterey, New Leon." This locality, which I have been unable to find, may now be within the limits of the rapidly expanding city of Monterrey. So also may be "Guapuco and Guapuca, Monterrey," which appear as Couch localities in the herpetological catalogue of the United States National Museum. Although both of these are qualified by Monterrey, there is a distinct possibility they are misspellings for Guajuco. Baird (1857, pp. 234, 444) listed mammals collected by Couch at Guayapuco that he (Baird, p. 709) stated was "in north eastern Mexico, not far south of the Rio Grande of Texas." I have been unable to find a Guayapuco, and it, too, may be a misspelling or the result of an error in transferring data from handwritten tags or notes.

SANTA CATARINA, NUEVO LEÓN, APRIL

PESQUERÍA GRANDE (= VILLA DE GARCÍA), NUEVO LEÓN, MAY

Just as he probably was attracted to the Cola de Caballo, Couch, as Gordon (1953, p. 173) implied, almost certainly visited the spectacular Cañon de la Huasteca that is very close to Santa Catarina. Pesquería Grande, on the Río Pesquería, is now known as the Villa de García (Smith and Taylor, 1950, p. 184; Axtell, 1961, p. 148).

RINCONADA, COAHUILA, NO DATE

SALTILLO, COAHUILA, MAY

BUENA VISTA, COAHUILA, NO DATE

AGUA NUEVA, COAHUILA, MAY

PATOS (= GENERAL CEPEDA), COAHUILA, NO DATE

CASTAÑUELAS (= CASTAÑUELA), COAHUILA, NO DATE

PARRAS, COAHUILA, NO DATE

RÍO NAZAS, COAHUILA, NO DATE

RÍO NAZAS, DURANGO, JUNE

From Monterrey Couch apparently ascended the easy pass through the Sierra Madre Oriental to Saltillo and then crossed the desert to Parras and finally to the Río Nazas near the Coahuila-Durango border, which probably was only vaguely defined in 1853. Presumably he worked near the mouth of that large interior river, which formerly terminated in the desert in western Coahuila. There he would have been within "the Plains of the lower Bolson de Mapimi," as stated in his

letter to Baird. I can find no evidence that Couch ever collected farther westward in Mexico.

Rinconada, as Milstead (1953, p. 373) pointed out, is a place name of frequent occurrence in Mexico, but it seems likely that the Rinconada visited by Couch would have been one appearing on a contemporary map and between other localities where he is known to have worked. Such a name shows on the Disturnell (1853) map as Rinconada Pass on the boundary line between Nuevo León and Coahuila. A village and a railway station designated as Rinconada are plotted in almost the same place on modern maps. The village is on the Monterrey sheet (*op. cit.*), and is situated near the summit of the pass through the Sierra Madre approximately 20 miles northeast of Ramos Arizpe. The Estación Rinconada, a nearby stop along the railroad, is included on sheet 22 of "La carta general de la República Mexicana . . ." (Ex-Comisión Intersecretarial, 1958). Both localities are in Nuevo León, however, and not in Coahuila as stated in the data accompanying material collected by Couch. In view of the vagueness of boundaries a century ago and the fact that the Disturnell map is notoriously inaccurate in delineating the borders of most of the Mexican states (in comparison with present-day maps), it is highly probable that Couch's specimens came from the general vicinity of the Rinconada near the head of the pass. This locality at least has the distinction of being directly on his route. Webb (1966, p. 58) accepted it as the type locality for *Thamnophis cyrtopsis cyrtopsis* (Kennicott), the type specimen (U.S.N.M. No. 8067) of which was collected by Couch in 1853.

Patos and Castañuelas seem to have disappeared from modern maps, but they were both plotted on earlier ones. Patos is now known as General Cepeda, which is situated on one of the arms of the Arroyo de Patos (Monterrey sheet, *op. cit.*). Castañuelas presumably is the same as Castañuela, a long-abandoned *rancho*, which is listed by the United States Board on Geographic Names (1956, p. 95) as occurring at latitude 25° 27' N., longitude 101° 46' W. The Estación Seguin, on the Saltillo-Parras railroad, appears on recent maps near that location.

Couch's return trip apparently was rapid, and there was little collecting en route, to judge from the paucity of localities accompanied by dates. He was back at San Diego, Nuevo León, on August 1, and in Tamaulipas in "August." Whether Couch made any side trips on his way home near one or more of the (undated) localities listed in the several references is not known. Kellogg (1932, p. 52) pointed out, however, that "a specimen labeled as having been taken by Lieutenant Couch at Ringgold Barracks, Tex., is dated July 15, 1853." Whether this date

was in error or whether some other mistake was involved cannot be determined at this time, and it is not apparent just where and when Couch exited from Mexico. The Ringgold Barracks (renamed Fort Ringgold in 1878) are at Rio Grande City, Texas.

It required many months for Lieutenant Couch to travel by horseback from Matamoros to the Río Nazas, and, although he admittedly progressed slowly and made frequent stops and side trips, the distance between the two end points, albeit by a somewhat different route, can now be traversed by automobile in a day.

ACKNOWLEDGMENTS

Dr. Ralph W. Axtell, who also has followed Couch's trail both in the field and in the literature, has very kindly permitted me to publish the results of his inquiries in Mexico concerning changes in the names of various settlements. He confirmed the present designations of Patos and Castañuelas during the summer of 1965, and his thoroughness is attested by his efforts during an earlier trip to find Pesquería Grande, now known as the Villa de García. He first made inquiry at Pesquería Chica, which appears on modern maps, then consulted the Nuevo León Information Bureau in Monterrey, and finally called in person on the mayor of the Villa de García.

Mr. Samuel T. Suratt, Archivist of the Smithsonian Institution, made the Couch-Baird correspondence available for my studies, and has granted me permission to include abstracts from it. Mr. Garry D. Ryan and Mr. Elmer O. Parker, of the Old Military Records Division of the National Archives and Records Service, supplied information on the Ringgold Barracks and Fort Brown and clues to Couch's military career. Dr. Charles M. Bogert helped to ferret out some of the more difficult localities, and the late Dr. Doris M. Cochran, Dr. Joseph Ewan, Mr. David Harris, Dr. Robert H. Kanazawa, Dr. Remington Kellogg, Dr. Ernest A. Lachner, Dr. Robert R. Miller, Dr. Hobart M. Smith, and Dr. Robert G. Webb assisted in various ways. My wife, Mrs. Isabelle Hunt Conant, drafted the map and was my constant companion in the field during the many times when we followed or crossed portions of Couch's route through northeastern Mexico.

Although most of the work on this paper was done in various libraries, chiefly at the Academy of Natural Sciences of Philadelphia, mention should be included that our field work in Mexico was made possible through the support of the National Science Foundation (Grants G-9040, G-22657, and GB-2177) and through the courtesy of the President and Board of Directors of the Zoological Society of Philadelphia. Collecting

permits were very kindly issued to me by Dr. Rodolfo Hernández Corzo and his predecessor, Ing. Luis Macías Arellano, Director General de Caza of the Departamento de Conservación de la Fauna Silvestre, in Mexico City.

To all of these persons and organizations I am grateful for aiding me in a project that has seemed more like a piece of detective work than any other research I have ever attempted.

LITERATURE CITED

AMERICAN AUTOMOBILE ASSOCIATION

1967. Mexico and Central America. 1967-68 edition. Washington, pp. 1-392, numerous maps.

AMERICAN GEOGRAPHICAL SOCIETY OF NEW YORK

1937. Monterrey, Mexico and the United States. Sheet N. G-14. Map of Hispanic America. New York, scale 1:1,000,000, topographic.

AXTELL, RALPH W.

1961. *Cnemidophorus inornatus*, the valid name for the little striped whiptail lizard, with the description of an annectant subspecies. *Copeia*, pp. 148-158, figs. 1-2.

BAIRD, SPENCER FULLERTON

1857. Report on the mammals. *In* Explorations and surveys for a railroad route from the Mississippi River to the Pacific Ocean. Washington, Ex. Doc. no. 78, pp. xxi-xlvi, 1-757, pls. 17-28, 30-60.
1859. Reptiles of the boundary. *In* United States and Mexican boundary survey, under the order of Lieut. Col. W. H. Emory, Major First Cavalry, and United States Commissioner. Washington, vol. 2, pt. 2, pp. 1-35, pls. 1-41.

BAIRD, SPENCER FULLERTON, JOHN CASSIN, AND GEORGE N. LAWRENCE

1858. Birds. *In* Explorations and surveys for a railroad route from the Mississippi River to the Pacific Ocean. Washington, Ex. Doc. no. 78, pp. i-lvi, 1-1005.

CULLUM, GEORGE W.

1868. Biographical register of the officers and graduates of the United States Military Academy at West Point, N. Y. New York, D. Van Nostrand, vol. 2, 1841-1867, p. 148.

DISTURNELL, J.

1847. Mapa de los Estados Unidos de Méjico. New York, scale 70 miles = 1 inch, political.
1853. Mapa de los Estados Unidos de Méjico, California, etc. [Revised edition.] New York, scale 70 miles = 1 inch, political.

EX-COMISIÓN INTERSECRETARIAL

1958. La carta general de la República Mexicana. Mexico City, scale 1:500,000, 47 topographic sheets.

GARCÍA CUBAS, ANTONIO

1898. Diccionario geográfico, histórico y biográfico de los Estados Unidos Mexicanos. Mexico City, Oficina Tip. (Tipográfico?) de la Secretaría de Fomento, vol. 1, pp. i-xx, 1-468; vol. 5, pp. 1-567.

GEISER, SAMUEL WOOD

1937. Naturalists of the frontier. Dallas, Southern Methodist University Press, pp. 1-341, 1 pl.

GIRARD, CHARLES

1858. Report on the fishes. In Explorations and surveys for a railroad route from the Mississippi River to the Pacific Ocean. Washington, Ex. Doc. no. 78, pp. i-xiv, 1-400, pls. 7-75.
1859. Ichthyology of the Boundary. In United States and Mexican boundary survey, under the order of Lieut. Col. W. H. Emory, Major First Cavalry, and United States Commissioner. Washington, vol. 2, pt. 2, pp. 1-85, i-ii, pls. 1-41.

GORDON, MYRON

1953. In the footsteps of Lieutenant Couch. Animal Kingdom, vol. 56, no. 6, pp. 173-175, 2 figs.

HENRY, JOSEPH

1855. Report of the Secretary. Ninth Ann. Rept., Board of Regents, Smithsonian Institution, Washington, pp. 7-30.

JOHNSON, ALLEN, AND DUMAS MALONE (EDS.)

1958. Dictionary of American biography. New York, American Council of Learned Societies, Charles Scribner's Sons, vol. 2, pt. 1, pp. 1-637.

KELLOGG, REMINGTON

1932. Mexican tailless amphibians in the United States National Museum. U. S. Natl. Mus. Bull. 160, pp. i-iv, 1-224, figs. 1-24, pl. 1.

McKELVEY, SUSAN DELANO

1955. Botanical exploration of the trans-Mississippi west: 1790-1850. Jamaica Plain, Massachusetts, Arnold Arboretum, Harvard University, pp. i-xl, 1-1144, 11 maps.

MILSTEAD, WILLIAM W.

1953. Geographic variation in the garter snake, *Thamnophis cyrtopsis*. Texas Jour. Sci., vol. 5, pp. 348-379, 8 figs.

SECRETARÍA DE AGRICULTURA Y GANADERÍA

1946. Atlas geográfico de los Estados Unidos Mexicanos. Mexico City, Dirección de Geografía, Meteorología e Hidrología, political and relief maps of each state and territory and the federal district with a tissue overlay of the municipal divisions of each, all at various scales.

SECRETARÍA DE ESTADO Y DEL DESPACHO DE FOMENTO, COMISIÓN GEOGRAFÍA DE GUERRA Y FOMENTO

- 1904-1905. Carta de la República Mexicana, a la 100 000a. Mexico City, topographic: sheet 10-IV-(E), 1904; sheet 11-III-(A), 1904; sheet 11-III-(B), 1904; sheet 11-II (U), 1905.

SMITH, HOBART M., AND EDWARD H. TAYLOR

1950. An annotated checklist and key to the reptiles of Mexico exclusive of the snakes. U. S. Natl. Mus. Bull. 199, pp. i-v, 1-253.

UNITED STATES BOARD ON GEOGRAPHIC NAMES

1956. Mexico. Gazetteer no. 15, pp. 1-750.

UNITED STATES COAST AND GEODETIC SURVEY

1946. Madre Lagoon, Mexico and the United States. World Aeronautical Chart, sheet 522. Washington, scale 1:1,000,000, topographic.

WEBB, ROBERT G.

1966. Resurrected names for Mexican populations of black-necked garter snakes *Thamnophis cyrtopsis* (Kennicott). Tulane Studies Zool., vol. 13, pp. 55-70, figs. 1-6.

YARROW, HENRY CRECY

1882. Check list of North American Reptilia and Batrachia, with catalogue of specimens in U. S. National Museum. U. S. Natl. Mus. Bull. 24, pp. i-vi, 1-249.