

THE F.W. PUTNAM-EDWARD PALMER RELATIONS IN THE DEVELOPMENT OF EARLY AMERICAN ETHNOBOTANY

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ABSTRACT.—F.W. Putnam (1839–1915), Curator of the Peabody Museum of American Archaeology and Ethnology at Harvard University, gave encouragement, aid, and financial support to Dr. Edward Palmer (1831–1911), a professional collector of plants and anthropological artifacts. Palmer collected widely in the southwestern U.S. and in northern Mexico for the U.S. Department of Agriculture, Geological Survey of California, Peabody Museum and Gray Herbarium of Harvard, and the Smithsonian Institution (U.S. Bureau of Ethnology and National Herbarium), and assembled copious notes on the uses of plants by the Indians. His work became the foundation for American ethnobotany. Correspondence Palmer sent to Putnam concerning financial aid, plans for the future, and progress in conducting the field work are presented.

RESUMEN.—F.W. Putnam (1839–1915), conservador del Museo Peabody de Arqueología y Etnología Americana de la Universidad de Harvard, dio estímulo, ayuda y apoyo financiero al Dr. Edward Palmer (1831–1911), un colector profesional de plantas y artefactos antropológicos. Palmer realizó extensas colectas en el suroeste de los Estados Unidos de Norteamérica y en el norte de México para el Departamento de Agricultura de los Estados Unidos, la Exploración Geológica de California, el Museo Peabody y el Herbario Gray de Harvard, y la Institución Smithsonian (Herbario Nacional y Oficina de Etnología de los Estados Unidos), y recabó voluminosas notas sobre los usos de las plantas por parte de los indígenas. Su trabajo llegó a ser la base de la etnobotánica norteamericana. Se presenta aquí correspondencia que Palmer le envió a Putnam referente a ayuda financiera, planes para el futuro, y avances en el trabajo de campo.

RESUME.—F.W. Putnam (1839–1915), conservateur du Musée Peabody de Archéologie et Ethnologie de la Université de Harvard a donné encouragement et assistance financière au Dr. Edward Palmer (1831–1911), collecteur de profession de plantes et d'objets archéologiques. Palmer a collectionné largement dans le sudouest des États Unis et dans le nord du Mexique pour le Département Américain d'Agriculture, le "Survey" Géologique de la Californie, le Musée Peabody et l'Herbier de Harvard et l'Institut Smithsonian (le Bureau Américain de Ethnologie et l'Herbier National), et a assemblé de notes copieuses sur les usages de plantes pour les Indiens. Son travail a devenu la fondation de l'ethnobotanique américaine. Correspondance envoyée pour Palmer à Putnam concernant l'assistance financière, des projets à l'avenir, et son progrès dans les travaux en champ se présentent ici.

INTRODUCTION

Frederic W. Putnam (1839-1915) was trained in zoology by Louis Agassiz at the Museum of Comparative Zoology, Harvard University. He began his scientific career as an ichthyologist and museum administrator, but in 1875 shifted his specialty to American anthropology when he was appointed as Curator for the embryonic Peabody Museum of American Archaeology and Ethnology on the Harvard campus (Dexter 1966, 1980). He retained a life-long interest in natural history and approached his own anthropological research from a biological point of view. In the course of his field work on American archaeology, he included ethnobiology (Dexter 1985). Also he encouraged others, such as Dr. Edward Palmer, and gave them financial support whenever he was able to do so.

Edward Palmer (1831-1911) was born in Norfolk County, England, the son of a florist and horticulturist (his life and career have been outlined by Safford (1911), but the year of birth is given incorrectly). At age 18 he emigrated to the United States, settling in Cleveland, Ohio, where he came under the influence of Dr. Jared Potter Kirtland, prominent physician and the first important naturalist in northern Ohio, who encouraged Palmer to study natural history. Dr. Kirtland instructed the young Palmer in methods of collecting and preserving plants and animals. On a U.S. government collection expedition to Paraguay (ship *Water Witch*) organized in 1853, he assisted the ship's surgeon as an apprentice and hospital steward as well as serving as a naturalist for some two years (the La Plata River Expedition under command of Lt. Thomas J. Page, U.S. Navy). Later, he obtained some medical instruction for a few months at the Cleveland Homeopathic College, but it was primarily his practical experience on ship board that qualified him for the title of "doctor" and led to an appointment (1862) as Acting Assistant Surgeon in the U.S. Army during the Civil War. After the war, Dr. Palmer practiced medicine in the western territories and became a professional field collector. He collected especially plants, and some archaeological and ethnological specimens, but his major contribution to science was his pioneering work in ethnobotany of the Indians in the southwestern U.S. and northern Mexico.

Harshberger (1896) early pointed out the usefulness of studying ethnobotany while Robbins, Harrington, and Freire-Marreco (1916) outlined the scope of ethnobotany. Gilmore (1932) reviewed the importance, usefulness, and methods of ethnobotany, and Carter (1950:74) advocated a wider use of ethnobotany in his statement that "It is probable that ecologists and geographers, too, could profitably follow the ethnobotanist and study all the plants affected by man's presence, and that all would benefit by considering a longer span of time than has been customary."

Hough (1911:173), soon after Palmer's death, declared him to be "an assiduous collector in ethnology and natural history." McVaugh (1956) published a volume on the life and work of Palmer, especially his career in collecting plants in the western territories. Bye (1972:88-89) in his study of ethnobotany of the Southern Paiute Indians included a sketch of Palmer's life and career as a professional collector, and explained the relation of Palmer to F.W. Putnam thus, "Palmer enticed the academic appetite of Frederic Ward Putnam of the Peabody Museum,

Harvard University, with a few duplicates of the 1875 excavations. As a result, the Peabody Museum hired Palmer during 1876–1877 to excavate other reported mounds in southwestern Utah. Palmer arrived in December 1876 and worked until the summer of 1877. He also collected botanical, zoological, and mineral ore samples from this region. Ethnobotanically, this trip was an important one. Case specimens of roots, seeds, and plants were sent to the Peabody Museum with notes of names and uses. ... These specimens and notes formed part of Palmer's (1878) second and most important botanical paper, 'Plants used by the Indians of the United States.' " Bye (1972:101) concluded that "Palmer laid the foundation for modern ethnobotany in western United States and Mexico." Later Bye (1979:135) wrote "Palmer's contribution—often unacknowledged—is the cornerstone of modern ethnobotanical research in North America."

PALMER'S FIELD WORK

Dr. Palmer collected plants under the direction of Dr. James G. Cooper for the Geological Survey of California in the late 1850s. In 1869 he was sent by the U.S. Commissioner of Agriculture to New Mexico and Arizona to report on agricultural resources with special reference to food plants used by the Indians. He collected both plants and ethnological objects. Following that he went to Sonora, lower California, and to Utah to collect plants. This led to his first important work (Palmer 1871, published anonymously, but generally known as his monograph). It was recognized as the first significant study of North American ethnobotany. Castetter (1944:158) regarded it as "the first attempt to present a systematic statement of the subject." Palmer (1873; 1874) subsequently published brief notes on the use of *Rhamnus croceus* as Indian food and Indian rope and cloth. Later, he again published (1889; 1891) brief notes on *Opuntia* fruit as food and Indian methods of preparing wool and cotton. Dr. John Torrey wrote to him that "You have in the last few years done great service to North American botany, and I trust that we shall receive yet greater benefit from your explorations" (Safford 1911:346).

In 1875 Palmer collected plants and information on their uses by natives at Guadalupe, Mexico, in southern California, and southwestern Utah. He published some brief notes (Palmer 1878a,b,c) and then a major work (Palmer 1878d) on plant utilization based on field work done since his paper of 1871. His manuscript was sent to Putnam, one of the founders and first editors of the *American Naturalist* published by Putnam's Salem Press (Dexter 1956). At about the same time, Palmer sent to Putnam a leaflet issued by the Smithsonian Institution in 1877 listing plants used by American Indians for food, medicine, etc. and distributed to various museums and herbaria (Item no. 428, Letter Book no. 4, Peabody Museum of Archaeology and Ethnology archives). Of the 61 plants listed with notes on uses, 24 had been collected by Dr. Palmer.

From Utah he went to San Bernardino, California, to replenish supplies, then on to Arizona, back to Utah in December 1876 to collect for the Peabody Museum. He wrote to Putnam 11 December 1876 from Davenport, Iowa, while preparing for field work at St. George, Utah, "I shall go at once to St. George and work on the mounds there, it being warmer. The entire results with notes etc. according

to our agreement will be sent promptly to you ... Many thanks for your efforts in getting the money and hope your expectations will be realized as I assure everything that can, will be done by me to render satisfaction to yourself and Museum." (Letter in archives of Peabody Museum of Archaeology and Ethnology.) In 1879–1880 he collected in Texas and in Mexico. On 12 January 1880 he wrote to Putnam from San Antonio, "Am sorry the Peabody Museum cannot furnish means to assist me in Mexico as it is an important field; hope you will be able to raise some means outside and send it to me in Mexico [in] New York drafts. Today ship the last of my collecting ... three packages of plants for Prof. Gray" [Harvard Herbarium]. (Correspondence of Palmer to Putnam here and hereafter is in the archives of Harvard University.) Eight days later he wrote again, "Hope you will be able to raise funds so as to enable me to examine the caves for mummies and collect the rest of the Indian material in northern Mexico." On 12 June 1880 he wrote from Parras, Mexico, that, "I came this way to visit the cave section 100 miles distant from which part returned a few days since. Have procured some curious things. Your Kentucky shoes [i.e. sandals—Dexter 1984] are equalled in rudeness by several pairs found made from Agave leaves and fibers, etc." Watson (1882, 1883) published the botanical results, but gave mostly his own descriptions of plants with only some of Palmer's field notes and a few notes on the uses of the plants.

During 1881–1884 Palmer collected plants and artifacts for the Peabody Museum of American Archaeology and Ethnology and for the U.S. Bureau of Ethnology in Tennessee, Arkansas, Indiana, North Carolina, Georgia, and Alabama. In 1881 Putnam tried to get a position for Palmer with a Lake Superior Survey, but he decided to remain working for Spencer F. Baird, Secretary of the Smithsonian Institution and Director of the U.S. National Museum. Palmer wrote Putnam from Helena, Arkansas, 10 January 1882, "As soon as I hear from him [Baird] will answer your letter regarding the position you were so kind as to recommend me to. I think it would be a delightful trip and Prof. Pumpelly has great experience and there would be no military about it." However, he chose to collect specimens for the Smithsonian Institution, with its bureau of Ethnology and U.S. National Herbarium.

On a visit to Washington, D.C., Palmer wrote to Putnam 15 March 1882, "Has Mr. [Lucien] Carr published his paper on corn as used by Indians? I think he said it was to be published in the Kentucky Survey Report." Carr was Putnam's Assistant Curator at the Peabody Museum who published a major work on the foods and methods of their preparation by American Indians (Carr 1895).

In 1885 Palmer studied the ethnobotany of Indians in the southwestern U.S. Again, Watson (1886, 1887) published his descriptions of the plants collected, but included only a few of Palmer's field notes and indications of plant uses. On another visit to Washington D.C., Palmer wrote to Putnam 9 February 1888, "Just returned from the region of Guayana Sonora, Mexico, to which place went last June. Made principally botanical specimens, about 600 species!" On 17 May 1888 he wrote again, "I have been sick most of the winter ... as medical advice recommends me to go to a mountain region so in a day or two will start for San Bernardino, Southern California, to meet a party desiring to go with me to the mountain region of the west side of Guatemala. ... It's a new country to me, but

guess something is to be found worth bringing away." While in California he collected plants for the Department of Agriculture before his departure for Mexico, and reports of plants from both areas, with his field notes and notes on utilization, were subsequently published by Vasey and Rose (1890a,b). Two years later Palmer collected plants in lower California, Arizona, and western Mexico. Again, the plants with field notes and uses were published by Vasey and Rose (1890c) and by Rose (1891, 1892, 1895). Upon his return to Washington D.C., Palmer wrote again to Putnam on 15 June 1891, "After an absence of three years mostly in Mexico, returned to this city. Collections made give entire satisfaction, Botanical collections quite full containing many new species and some [new] genera. ... There is some talk of sending me to Mexico again botanizing. ... Mexico is very strict regarding shipping antiquities out of the country. So far have succeeded in passing my collections among packages of botanical specimens." He made his last trip to Mexico in 1910 when he collected along the Gulf Coast near Tampico, Tamaulipas.

During 1899-1900, a course on uses of plants by American Indians was given at the Peabody Museum for students at Radcliffe College by Dr. Frank Russell, a former student of Putnam's, and an instructor in the Department of American Archaeology and Ethnology, Harvard University. The substance of the course was summarized by Chamberlain (1901), including much of Palmer's publications and papers based on his work.

DISCUSSION

In addition to his field work on the uses of plants by North American Indians, Dr. Palmer collected over 100,000 specimens of plants and discovered 1,162 new species, some 200 of them named after him (Safford, 1911). However, he is best known as a pioneer in developing American ethnobotany. Castetter (1935) and Maurice (1950) made frequent reference to his work, and Yanovsky (1936), in his summary of literature on food plants of American aborigines, reported that from a total of 1,112 species listed, Palmer published notes on 164 species. Kidwell (1973:46) emphasized that "It is probably in the field of botany that there is the strongest basis for attributing to Indians the use of scientific method in connection with nature. The observation of plants and knowledge of their uses indicates a pragmatic concern with natural phenomena." In developing our understanding of such matters, Ford (1978:38) has stated that, "The best studies of Indian uses of plants came from botanists. If any scientist epitomized the new trend, it was Edward Palmer, who not only described the vegetation of the West, but also made inquiries about plants useful to the Indian people he deliberately visited." F.W. Putnam of Harvard University was instrumental in aiding Dr. Palmer's pioneering work in ethnobotany.

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