

SPECIAL REPORT

PORCUPINE DAMAGE AT MONTEZUMA CASTLE NATIONAL MONUMENT

W. B. McDougall

Regional Biologist

Santa Fe, New Mexico
March 1942

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Under date of February 23, Acting Superintendent Thomas of the Southwestern National Monuments wrote to the Regional Director, Region Three, requesting that a study be made of a problem at Montezuma Castle National Monument, as set forth by Custodian Jackson in a memorandum for the Superintendent, Southwestern National Monuments, under date of February 18. Mr. Jackson's statement was to the effect that some unidentified species of animal was doing an unusual amount of damage to sycamore (Platanus wrightii) and hackberry (Celtis reticulata) trees and to creosote bushes (Larrea divaricata).

On March 5, I proceeded to Montezuma Castle National Monument for the purpose of investigating these depredations. I was met at the monument by Associate Forester Carlson and, together with Custodian Jackson, we examined the damage to the three species concerned.

The depredations in all cases were found to be the work of porcupines, probably the Arizona porcupine (Erethizon epixanthum couesi). Most of the sycamore trees in the monument are large and, although patches of bark of considerable size have been eaten from various parts on some of them, none of them seem to be threatened with death from this source at this time.

The damage to the hackberry trees is somewhat more serious. The trees are of various sizes and slow-growing. It is probable that some of the larger trees are as much as 200 years old. Since the only trees in the monument are those along the one stream that traverses the area, these trees have a rather special value. One grove of about 60 hackberry trees, at some distance from headquarters, has received the most extensive damage. Two medium sized trees in this group will probably die because girdling is very nearly complete.

Damage to creosote bushes is much more extensive than that to the trees. Many branches have had most of the bark removed. Many branches are already dead and their leaves have turned brown and many others will die. This cannot be pronounced serious because there are a great many creosote bushes in the monument and even those that have practically all of their branches killed will very likely sprout up again during the next rainy season.

The feeding of the porcupines on the creosote bushes, however, is exceedingly interesting because the creosote bush is generally considered unpalatable to nearly all animals. Quail have been known to eat the fruits and antelope ground squirrels and jack rabbits have been known to nibble at the bark, but I do not know of any previously recorded instance of porcupines feeding on this species.

Mr. Jackson, whose acquaintance with central Arizona extends back for approximately a quarter of a century, says he has never before seen in this vicinity porcupine depredations comparable to those that occurred in Montezuma Castle National Monument during February. It is evident from mere observation that there has been some porcupine feeding in the sycamore and hackberry trees in this monument for a great many years but not on such a scale as this year. In sharp contrast with the preceding year, the winter of 1941-42 has been extremely dry and it may be that this or some other combination of factors in the climatic conditions has brought about abnormal feeding habits in these porcupines.

It is believed that most of the damage has already been done for this year since, during the summer, the animals will undoubtedly feed largely on herbaceous vegetation and they may leave the monument entirely. They may or may not return in numbers next winter. In view of these facts, it was agreed that no recommendation for control measures could be made at this time.

The prompt reporting of the situation by Custodian Jackson is much appreciated and it is hoped that he will be able to keep rather close watch of the trees in the monument and report any increase in porcupine activity, especially during the next winter season.

W. B. Medsger
Regional Biologist.