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WAKE, DAVID B. 1965. *Aneides hardii*, p. 17. *In* W. J. Riemer (ed.), Catalogue of American Amphibians and Reptiles. American Society of Ichthyologists and Herpetologists, Kensington, Maryland.

Aneides hardii (Taylor)
Sacramento Mountain salamander

Plethodon hardii Taylor, 1941:77. Type-locality, "Sacramento Mountains at Cloudcroft (9,000 ft. [2745 m]), [Otero County], New Mexico." Holotype, male, Chicago Nat. Hist. Mus. 100103, collected by D. E. Hardy, 29 June 1940.

Aneides hardii: Lowe, 1950:95. Transfer of *P. hardii* Taylor to *Aneides*.

Aneides hardyi: Schmidt, 1953:51. Emended spelling erroneously attributed to Lowe, 1950.

● CONTENT. This is a monotypic species.

● DEFINITION. Adult: The body is dark blackish brown to brown dorsally, but much lighter ventrally. All but the largest adults are mottled dorsally with greenish gray to bronze. Mean snout-vent length is 47 mm with a range of 40–58 mm. Tail length averages slightly shorter than snout-vent length. The trunk and tail are round. Costal grooves number 14–15. Limbs are short with 2–4½ costal folds between adpressed limbs. Digits are short and only a little expanded distally. The temporal region of the head is slightly swollen by the jaw musculature, especially in males. The vomerine teeth extend laterally beyond the lateral margins of the internal nares. Maxillary teeth are short, conical, and numerous—males 14–22, mean 19; females 28–36, mean 31—and the tooth row extends posteriad to or slightly beyond the anterior edge of the eyeball.

Juvenile: The young may have a brownish to bronze dorsal stripe on a darker ground color, or they may be unstriped.

● DESCRIPTIONS. Eggs are described by Lowe (1950), Schwartz (1955), and Johnston & Schad (1959); embryos by Lowe (1950), and Schwartz (1955); size variation by Schad, Stewart, & Harrington (1959); external morphology and coloration by Taylor (1941), Bishop (1943), Lowe (1950), and Stebbins (1951, 1954); osteology and dentition by Wake (1963). Breeding behavior, spermatophores, and egg deposition are undescribed. Variation in external morphological features is insufficiently analyzed.

● ILLUSTRATIONS. Photographs of adults are present in Bishop (1943), drawings of adults in Stebbins (1951, 1954). Throat musculature is illustrated in Hilton (1952), and the skull in Wake (1963). A habitat photograph is present in Stebbins (1951).

● DISTRIBUTION. The species is known from 8500 to 11,000 feet [2590–3360 m] in the Capitan Mountains and Sierra Blanca of Lincoln County, New Mexico, and the Sacramento Mountains of Otero County, New Mexico. The range is discontinuous, and salamanders are restricted to the transition between Rocky Mountain Montane and Subalpine Forests where Engelmann spruce (*Picea Engelmannii*), Douglas fir (*Pseudotsuga Menziesii* var. *glauca*), and white fir (*Abies concolor*) are the dominant trees.

Salamanders are found in and under logs that are at varying but usually advanced stages of decomposition, and occasionally under stones and ground litter (Stebbins 1951).

● FOSSIL RECORD. None.

● PERTINENT LITERATURE. Many aspects of the natural history (habitat, food, foraging behavior, parasites, sex ratio, age ratio, breeding season, clutch size, care of eggs) are treated by Johnston & Schad (1959). Biogeography is discussed by Blair (1958:450), relationships by Lowe (1950), and Wake (1963).

● REMARKS. The ecology is poorly known. Eggs are usually laid in well-rotted logs.

● ETYMOLOGY. The species is named for the original collector, D. E. Hardy.

COMMENT

Three geographically disjunct populations of *A. hardii* exist. Schad, Stewart, & Harrington (1959) found some minor proportional differences among the populations, the population occupying the Capitan Mountains being the most distinct. They conclude that subspecific recognition is unwarranted.

I have compared skeletons of specimens from the Capitan Mountains with some from the Sacramento Mountain population and find them to be identical.

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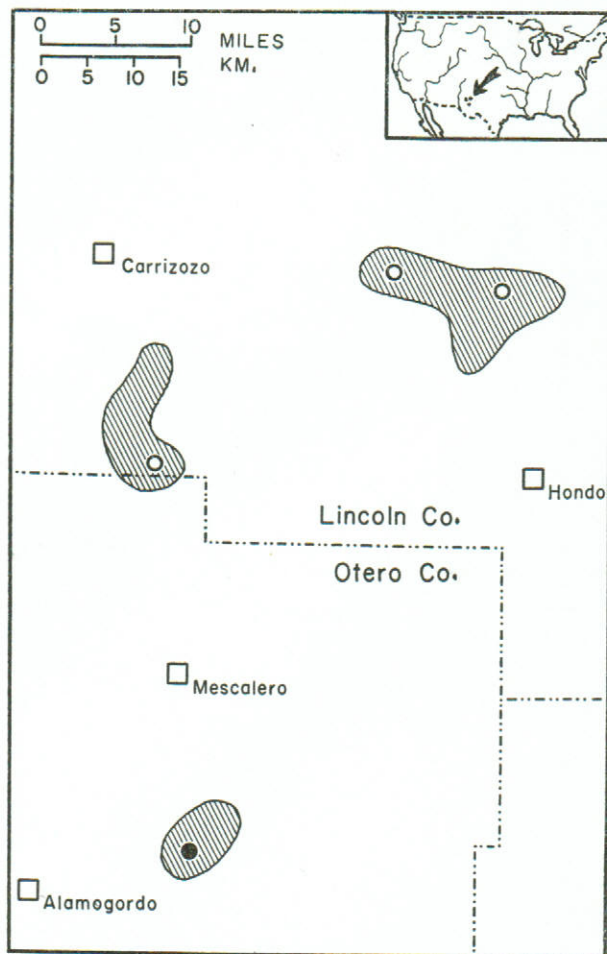
MAP. The type-locality is marked by a solid dot; all other known localities are recorded as hollow dots. The presumed range shown is based on features of elevation and vegetation.

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