

NEST OF *FORMICA PROPINQUA* (HYMENOPTERA:FORMICIDAE)

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ABSTRACT.— The nest of the ant *Formica propinqua* W. M. Wheeler is reported from Washoe Co., Nevada.

Little Valley is in the Carson Range, which, according to Fenneman (1931:402), is a subordinate range of the Sierra Nevada, "an uplifted block between parallel faults, a separate range from the Sierra Nevada but included in the same physiographic section. Lake Tahoe occupies the 'moat' between the fault scarps of the main Sierra and Carson Ranges."

Whittell Forest, which is practically coextensive with Little Valley, is a biological research area owned by the University of Nevada at Reno. The legal description places it in T 16 N, R. 19 E., sections 5, 8, 17, 18, 19, 20, in Washoe County, Nevada.

Our study site is in the SW $\frac{1}{4}$ of section 17, about 4 miles east of Lake Tahoe and 20 miles south of Reno. It is in a second-growth pine forest. The range was denuded of its virgin forest after the silver rush of 1859: our site is only 12 miles from Virginia City with its Comstock Lode. A few huge stumps are evidence of the original cover, even after 140 years.

The site is an open portion of a forest of Jeffrey pine (*Pinus jeffreyi*) and lodgepole (*P. contorta*), which is mostly surrounded by dense forest. We staked out in 50 foot squares an area totaling 2.7 acres (= 1.1 hectare). On the area there were 210 lodgepole (range 1–34 inches DBH, average 16.6 and median 15 inches) and 27 Jeffrey (range 1–36 inches DBH, average and median 19.8 inches).

In this area we found 35 nests of *Formica propinqua*. We numbered each nest, photographed it, and plotted it on the map. This gives an average of 13 nests per acre (= 32 per hectare). We did not find this species anywhere else in the forest. In fact, although we have it at several localities in Nevada and

California, we have never seen so many nests in such a small area.

The nests were always in the open, where they were fully exposed to the sun for at least part of the day. We never found them in full shade and hence never in the dense forest.

A nest was always associated with solid dead wood. It could be in or under a prostrate trunk (even a trunk several feet above the ground), in or around a stump, or along a mere slab; the wood might be decayed inside but at least a part of the outside was solid.

The shape of the nest mound was highly variable; we never found two alike; the ants were highly opportunistic in this respect. This is in sharp contrast to certain other members of the *rufa* species-group of *Formica*, which typically construct neat paraboloidal domes. The accompanying photographs illustrate this variability in *F. propinqua*.

The nest material comprised pieces of plant stems about one inch long. These are mixed with smaller plant debris, decayed wood, and soil. In other words, again this species differs from some of its *rufa* relatives, which build typical neat mounds of one or a few kinds of longer pieces of plant materials, e.g., sagebrush twigs, grass culms, pine needles or juniper sprays. In short, the nest mounds of *propinqua* are messy.

THE ANTS

It would be very interesting to know the population of this entire community. Speculation leads us to think in millions; but it is so easy to underestimate or overestimate an ant population and so difficult to get an actual census, let us be content with *enormous*.

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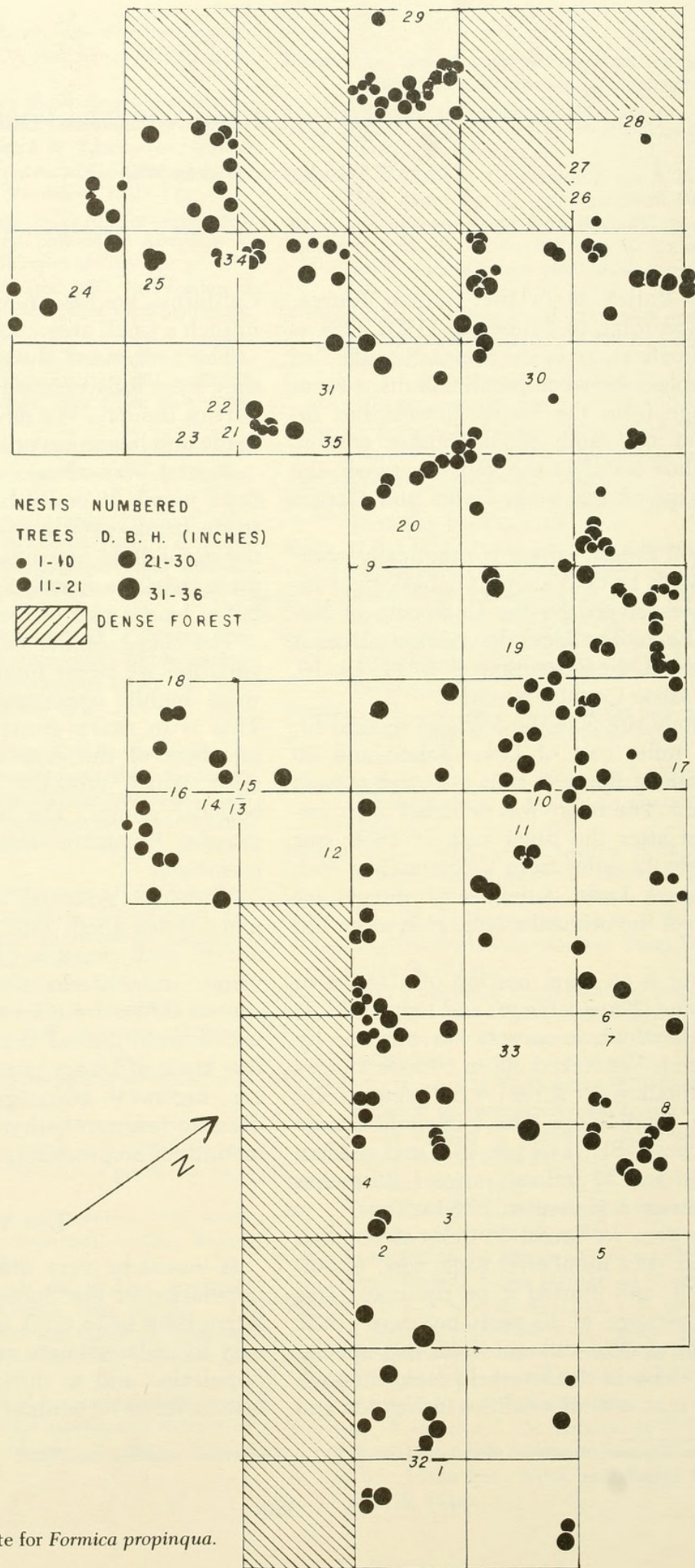


Fig. 1. Map of study site for *Formica propinqua*.

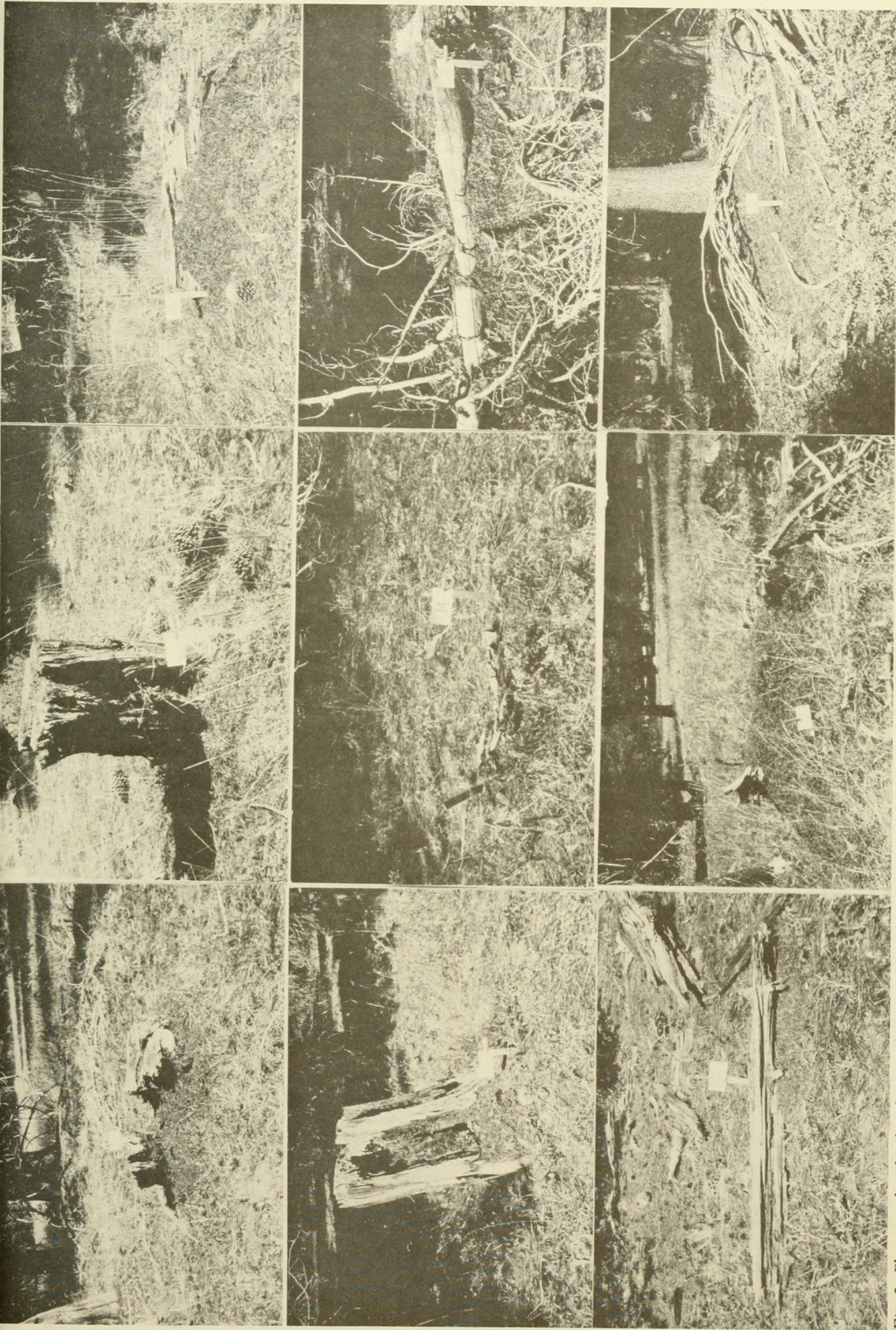


Fig. 2. Photographs of 9 thatch mounds of *Formica propinqua* in the study area.



Wheeler, George C. and Wheeler, Jeanette. 1981. "NEST OF FORMICA PROPINQUA (HYMENOPTERA:FORMICIDAE)." *The Great Basin naturalist* 41, 389–392.

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