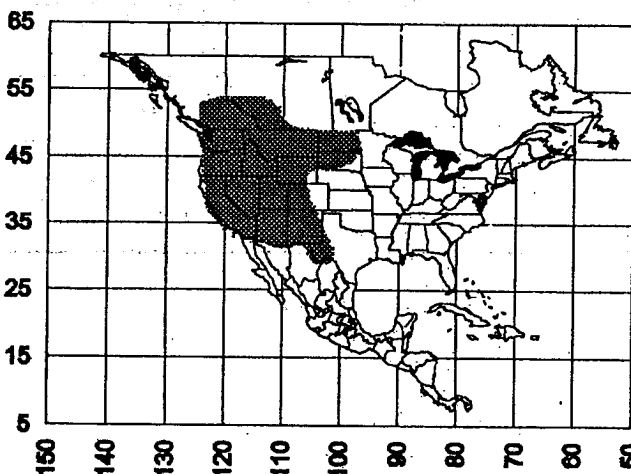


postpetiole of *L. rugatulus* are rarely rugose (Fig. 154), whereas in this form they are always rugose and roughly sculptured (Fig. 155). The anterior lateral angles of the gaster are blunt as seen from above (Fig. 154), whereas the identical angles of this form are sharp (Fig. 155). When specimens from the extremes are examined, it seems obvious that this form is a valid species, but would one looks at the entire variability of *L. rugatulus*, the striking differences are no longer that distinct. None of the characters listed above will consistently separate this form from *L. rugatulus*. Thus this form will be considered as being within the range of the variability of this species. It was collected at two localities: California, Tulare Co., Sequoia National Park, 36°31'42.9" 118°46'27.0", 990 m, 8-vii-1998, Mackay family #18410 (CWEM); and CALIFORNIA, Humboldt Co., Humboldt Redwood State Park, 40°17'6.6" 123°53'41.1", 11-vii-1998, Mackay family # 18483 (1 worker CWEM).

*Leptothorax rugatulus brunnescens* continued to be recognized by Creighton (1950) as a valid subspecies, based on "rather elusive characters" (Gregg, 1963). Creighton (1950) stated that the thoracic rugae of this subspecies are largely obliterated by punctures and the cephalic rugae are feeble, whereas the thoracic rugae of the typical subspecies are well developed and the cephalic rugae are stronger. I agree with Creighton that the differences between specimens are extreme in some cases, but as there is considerable variation in the thoracic rugae, even from individuals from the same nest (Wheeler and Wheeler, 1963), this character is not sufficient to separate the two taxa. The cephalic rugae are quite variable as was stated by Creighton (1950)



Map 41. Distribution of *Leptothorax rugatulus*.

and are useless as a character to separate these two. I have seen specimens with less development of the thoracic rugae than the type series of *brunnescens* and others with much better developed rugae than the type series of *rugatulus*. Therefore if we continue to recognize *brunnescens* as a separate taxon, we will be forced to rec-