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Sirex juvencus californicus in smog-killed trees in southern California (Hymenoptera: Siricidae). —Near Lake Arrowhead, California, bolts were cut on 21 February 1967 from nine ponderosa pine (Pinus ponderosa Laws.) trees showing advanced decline caused by photochemical atmospheric pollution. These were subsequently placed in cold storage at about 5° C. Between 8 and 21 March some of these bolts were transferred to screen cages in a glasshouse which was not temperature controlled.

During the period 21 May to 13 June, a total of 33 male and 14 female Sirex juvencus californicus (Ashmead) (Hymenoptera: Siricidae) adults emerged from these bolts. A few adults, mostly males, had emerged prior to these daily observations. Males tended to emerge earlier and in greater numbers than females. However, since the sample size was so small and the bolts had been subjected to cold storage, these observations do not necessarily contradict an earlier observation (Cameron, 1967, Can. Entomol., 99: 18-24) that "males and females emerged in almost equal numbers throughout the emergence period." In general, the adults emerged from only one side of the bolt, and the emergence holes were not in an area with bluestain fungi (Ceratocystis spp.). It has been suggested (personal communication, Fields W. Cobb, Jr., Department of Plant Pathology, University of California, Berkeley) that perhaps the Amylostereum sp. associated with the siricids has an inhibitory effect on the development of bluestain.

One adult female Ibalia ensiger Norton (Hymenoptera: Ibaliidae), an egg parasite of siricids, emerged from the bolts on 4 June.

While an association between atmospheric pollution injury and bark beetle infestations has been established (Stark et al., 1968, Hilgardia, in press), this represents the first report of the development of a siricid and one of its parasites in smog-killed trees.—E. Alan Cameron, University of California, Berkeley.

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