

FERAL HOUSE CRICKETS *ACHETA DOMESTICUS* (L.) (ORTHOPTERA:GRYLLIDAE) IN SOUTHERN CALIF.¹

David B. Weissman,² D.C.F. Rentz³

ABSTRACT: Feral house crickets (*Acheta domesticus* (L.)) have been discovered in southern California. The crickets have apparently become established as escapes from pet shops and bait stores. The crickets sing almost always at night and live in situations associated with man.

Acheta domesticus (Linnaeus) is a species generally considered native to Europe, but according to Ghouri (1961) may have originated from northern Africa or southwest Asia. It is cosmopolitan, distributed by man, and has been reported in the eastern United States by Blatchley (1920) and Alexander (1957). We are aware of no reports of the species west of the Rocky Mountains although individuals are sold in pet stores and bait shops across the country. Surprisingly, the species lacks survival in peninsular Florida (Walker, personal communication). Our investigations into the California field crickets (Rentz and Weissman, 1978; Weissman and Rentz, 1978) revealed numerous, apparently feral, populations of *A. domesticus* in Orange County, California.

All feral house crickets captured have been macropterous, although Blatchley (1920) reports "micropterous" feral specimens in his study, and numerous "micropterous" adults can be found in pet store stocks. As Walker (1972, 1977) notes, such micropterous individuals probably represent crickets that have shed their metathoracic wings, possibly secondary to a poor protein food source. Autecological information below pertains to feral individuals only.

Recognition characters. — *A. domesticus* is distinguished from *Gryllus* species by its straw brown overall coloration; and head with an irregular, dark, transverse bar extending between the eyes near their dorsal border. There may be several smaller,

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² Associate in Entomology, California Academy of Sciences, San Francisco.

³ Division of Entomology, CSIRO, Canberra, Australia.

lighter bars on either side of this large bar. The genitalic complex is equally distinctive (Randell, 1964). The number of teeth per millimeter in the file of the male stridulatory ridge of *A. domesticus* exceeds that seen in all western *Gryllus* species (Weissman and Rentz, unpublished). Over 50% of males have more than 200 teeth in the file (maximum 225).

Western geographical distribution. – We have found feral *A. domesticus* in the cities of Tustin, Santa Ana, Orange, and Crystal Cove (a linear distance of some 30 km), Orange County, California. The species is undoubtedly more widely distributed.

Song. – In the field house crickets sing almost exclusively at night. An isolated individual may be heard on overcast days, especially late in the year. The chirp rate is slow, usually 2-3 pulses per chirp (see figure 1).

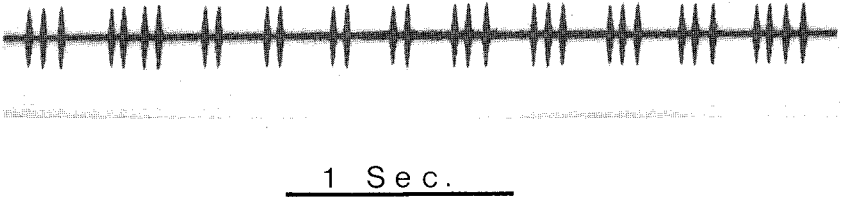


Figure 1. Calling song of house cricket, *Acheta domesticus*. Feral male at 20°C.

Seasonal occurrence. – Singing males first appear in mid to late spring disappearing by late fall. It is not known if there is more than one generation per year in the field, although crickets kept in stores can have continuous generations with proper resources thus indicating the absence of any obligatory dormancy period.

Habitat. – Feral house crickets occur in a variety of habitats, but always are associated with human structures. Individuals occupy cracks in buildings and the ground or are found under vegetation around buildings, cultivated areas, and railroad stations. The population at Crystal Cove was found under boards and ice plant (*Mesembryanthemum* sp.) around houses on the sandy beach front.

Discussion

Unlike the situation with most *Gryllus* species, *A. domesticus* is not always sympatric with other field crickets, further emphasizing its cosmopolitan nature. We do find an occasional *Gryllus* cricket, from any of a number of species, within *Acheta* populations.

Macropterous crickets may fly, but all our efforts to elicit flight in feral house crickets have failed.

Measurements (in mm)

Males

Locality	Length Body	Number Teeth	Length File	Teeth per millimeter
Tustin mean \pm S.D.	17.7 \pm 1.3	204.3 \pm 15.3	3.1 \pm 0.2	65.9 \pm 6.8
n= 15 range	14.5-19.7	176-225	2.9-3.7	53.2-75.5

Females

	Length Body	Length Ovipositor
Tustin range m=2	16.5-19.0	12.2-12.3
Crystal Cove range n=2	15.5-17.0	9.5-11.5

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Note added in proof: additional field work in 1977 has uncovered feral populations of *A. domesticus* in Calexico, Imperial Co., Calif. and across the border in Mexicali, Baja Calif. Norte.