

3 Biology

The biology of cockroaches is intricate and fascinating. The few studies that have been done reveal an array of biological strategies, many of which are unique. The often abundant wood-eating panesthiine cockroaches (p. 90) are probably very important in the return of wood to soil in the wet forests. These cockroaches seem to have some communal organisation since they are usually found in family groups. The related geoscapheines (p. 84) are endemic to Australia and have a burrowing habit and lifecycle spanning several years. They can be exceedingly abundant in certain areas and since their food consists of fallen leaves, they must be important in the recycling process. Blattellines (family Ectobiidae) (p. 203) of several genera are to be found in every handful of leaf litter

whether it be in rainforest or dry sclerophyll woodlands. The continent also harbours a fauna of diurnal cockroaches most of which are strikingly colourful. Several seem to be part of Müllerian mimicry complexes. Many polyzosteriine (family Blattidae) (p. 121) cockroaches are diurnal. They are unusually large and can be found moving on the ground or perched high in bushes in full sunlight. They make ideal subjects for display in insect zoos and are frequently kept as pets. Pseudophyllodromines (family Ectobiidae) (p. 255) of the genera *Ellipsidon* and *Balta* are some of the most colourful of Australian cockroaches and can be found on flowers or basking in the sun on leaves during the day. Many of these cockroaches seem to resemble distasteful lycid beetles and have white antennal tips, an alluding effect that breaks up the pattern of the antennae. This may give the 'owner' a bit of added protection against vertebrate



The tip of the abdomen of an adult male *Melanozosteria* sp. showing sticky defensive secretion.



Adult *Balta* sp. killed by fungal or bacterial infection.