

II | Systematics

The Cimicidae are unique among the Hemiptera in the amount and types of information available to the systematist. In addition to the traditional evidence from external characters, studies of internal anatomy, cytogenetics, and experimental taxonomy are available. In the present chapter such evidence is combined with data on geographical distribution and host relations to arrive at a workable species concept and a probable phylogeny. Table 11-1 lists the subfamilies, genera, and species of Cimicidae with zoogeographic regions and hosts. The sequence is from generalized to specialized within each line, as discussed under phylogeny.

GEOGRAPHICAL DISTRIBUTION

Except for the species distributed by man, the patterns of distribution of the major groups of Cimicidae are clear and separate. Twelve genera are confined to the New World and 8 to the Old World, with only *Cimex* and *Oeciacus* common to both. Haematosiphoninae are exclusively American, and Cacodminae extend from Africa to the Oriental Region. Primicimicinae are local bat bugs in Texas and Guatemala (*Primicimex*) (Fig. 11-14) and southern Chile (*Bucimex*) (Fig. 11-1). Two anomalous groups that stand out as monotypic subfamilies are *Afrocimex* (Fig. 11-12) on fruit-eating bats in Equatorial Africa, and *Latrocimex* (Fig. 11-1) on fish-eating bats in tropical South America. Only the subfamily Cimicinae is complex, with *Propicimex* and *Bertilia* in South America (Fig. 11-1), *Paracimex* on cave swiftlets in Southeast Asia (Fig. 11-6), *Oeciacus* on swallows over most of the Holarctic Region (Fig. 11-5), and *Cimex* throughout most of the world. Excluding the semidomestic species for the moment, the genus *Cimex* comprises 2 groups: The *Cimex pipistrelli* group on bats throughout the Palearctic Region (Fig. 11-3) and the *Cimex pilosellus* group on bats throughout the Nearctic Region (Fig. 11-4). Interesting gaps are the absence of native Cimicidae in Australia and Central America, and the lack of bird bugs of any kind in the Ethiopian Region and in Central America.

The distribution of bat bugs shows a remarkable parallel with the distribution of their hosts (Allen 1939). Five genera are confined to the