In the past, there has been some discussion as to whether the zorapterans belong in the orthopteroid group of orders or whether they belong in the hemipteroid orders. This version of your text places them in the middle of the orthopteroids (this is probably based heavily on wing venation characters and a publication by Kukalova-Peck). We will discuss differences between the orthopteroids and the hemipteroids later when we get the first hemipteroid order.

ZORAPTERA

These are the zorapterans or sometimes they are called angel insects. The order name means purely (= Zor-) wingless (= -aptera), and refers to the fact that at the time they were first described (1913) only wingless forms were known, and it was thought that this was a diagnostic character. This is one of the smallest orders with only 33 present day species and 5 fossil species worldwide. There are only 3 species in the U.S., one is widespread, another occurs in Florida and Jamaica, and the third occurs in Hawaii. Until recently, all species were placed in a single family, Zorotypidae, and a single genus, *Zorotypus*. Kukalova-Peck & Peck, 1993, split the order into 7 genera, and indicated that there might need to be 2 families; more recently, they erected a number of genera and families within the Zoraptera. The common U.S. species is now in *Usazoros* (the species name is still *hubbardi*).

The characters are basically those listed on the synopsis sheet. They are very small (3mm), soft-bodied insects resembling termites. They are hypognathous with chewing mouthparts. Winged forms have compound eyes and ocelli; both are lacking in wingless forms. The antennae are 9-segmented and are moniliform or filiform. They have relatively short legs with 2-segmented tarsi and paired tarsal claws. They have short 1-segmented cerci which terminate in a long bristle.

The order is widely distributed in the wet tropics. Species are known from all the major zoogeographic regions of the world, except the Palaearctic. In North America, they occur in the southeast as far north as southern Pennsylvania and southern Iowa where they occur in deciduous forest regions. In warm temperate regions, zorapterans have been found in sawdust piles that were warmed by heat of decay. They also have been found in rotting logs and under loose bark where they appear to be gregarious. They are probably not truely social. The wind is believed to be a chief means by which they can be further distributed. Fertilized winged females are blown about and can establish new colonies. Little is known about their feeding habits. It is suspected that they feed on fungi and small dead arthropods.

The apterous forms are more common than the winged forms. The winged form is slight pigmented, and usually have compound eyes and ocelli. Winged forms can shed their wings much like the termites.

There is a courtship dance after which the female crawls on the males back.