

6 ECOLOGY

Russian investigators characteristically assume that environmental factors directly affect ectoparasite populations. For this reason, Russian scientific literature contains many references to biotopes in which particular tick species are found. Thus, in the Khabarovsk Territory, Emel'yanova & Koshkin (1962) collected *Ixodes angustus* in spruce-fir and "mixed" (presumably transitional coniferous-deciduous) forests, whereas in the Primorsk Territory, Gamalayev (1966) found this species most common in cedar-broadleaf forests with a southern exposure. On the Kamchatka Peninsula, Paramonov et al. (1966) recorded *I. angustus* from spruce-larch forest with dense understory vegetation, birch-larch forest with and without understory, birch-alder forest, cedar groves, older secondary woods, and even low tundra shrubbery. In her reviews of *I. angustus*, Filippova (1967, 1977) repeated these observations but added that this species may also be found in high-altitude deciduous forests, in talus slopes or outcrops and, less often, in riparian situations. However, Savitsky & Okuntzova (1967) collected equal numbers of *I. angustus* in forest and riparian habitats on Sakhalin.

Serdyukova (1956) noted only that *I. pomerantzevi* occurs "in forests." Later, Slonov (1961), working in the southern Primorsk, collected large numbers of this species in cedar stands with a southern