

## *Psammodromus hispanicus* FITZINGER, 1826

### Spanish sand lizard *Lagartixa-do-mato-ibérica*

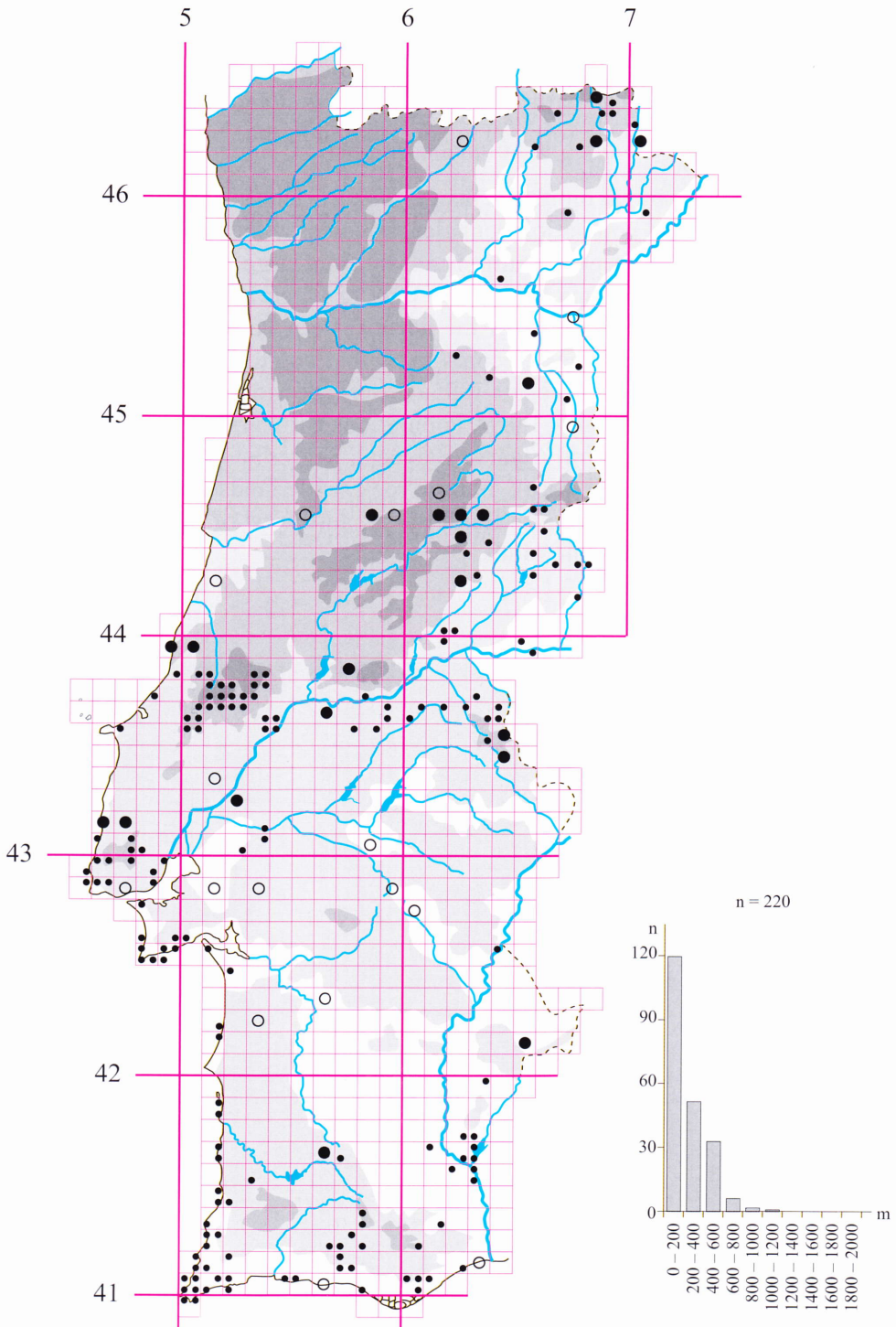
*Psammodromus hispanicus* is native to the Iberian Peninsula except for the entire Euro-Siberian zone and the Mediterranean parts of France. In the west and south of the peninsula it is represented by the nominate form, in the east and in France by *Psammodromus hispanicus edwardsianus* (DUGÈS, 1829).

*Psammodromus hispanicus* is by far more rare than *P. algirus*. This is not only obvious in the form of lower dispersal and population densities, but also by its comparatively very limited distribution pattern. The species is entirely absent from large parts of the Alentejo and northwest of a line, Leiria - Fátima karst - Rio Tejo, Rio Ocreza - Serra da Estrela - Serra da Lapa - Rio Tua. From the whole of the northwestern Portuguese region only unconfirmed and questionable historical records exist that could not be substantiated ever since, examples being 'Chaves' (FERREIRA 1895a), 'Serra de Mourela - Pitões (Montalegre)' (NOBRE 1903), 'Coimbra' (VIEIRA 1887). Populations with larger numbers of individuals occur in karst areas (e.g. central Algarve Barrocal, Sagres and Arrábida Peninsulas, Serra de Santo António, Serra de Aire), granitic rock castle landscapes (e.g. Gavião - Serra de São Mamede; eastern and central Beira Baixa; northwest of Almeida between Rio Côa and Rio Tourões), and on dune sands.



Fig. 206: Algarve. Photograph by P. NIEBERGALL.

*Psammodromus hispanicus*



In Portugal this thermophilous lizard is almost exclusive to the thermo- and meso-Mediterranean zones, advancing into supra-Mediterranean regions only in a few climatically beneficial niches (e.g. mountain range between Serra da Estrela and Serra da Malcata; northeastern Trás-os-Montes). With only a few exceptions all localities lie in regions that receive less than 1000 mm of annual precipitation. Its thermophilic requirements are also evident from the small range of its vertical distribution. Although it extends from sea level to 1050 m altitude (Serra da Nogueira) in total, 80 % of the records are situated below 300 m elevation and finds at above 600 m are exceptions. In Spain it has been recorded from 1700 m altitude (Barranco e las Casas de Don Diego/Granada, FERNÁNDEZ-CARDENETE et al. 2000).

*Psammodromus hispanicus* lives in open, plain or weakly to moderately inclined country with scattered bush and dwarf shrub vegetation (vegetation cover usually < 60%), a high degree of sun-exposure, with a variety of substrates: sand (coastal and inland dunes), firm ground (partly covered with rock debris, and partly a scant overgrowth of grasses and stunted forms of Mediterranean shrubs like those commonly found on the shallow skeleton soils of karst regions), as well as rocky areas (especially granite lapas) with a sparse vegetation in grooves within meadows speckled with *Genista-Halimium-Lavandula* heaths. Habitats of these types are found in the littoral on dunes, beside trails through *Pinus* woods, on the slopes of gorges, on plain levels of graduated cliff rises, and in garrigues behind the upper edge of cliffs, and show a scattered vegetation cover dis-



**Fig. 207:** Copulation; near Comporta, west of Alcácer do Sal. Photograph by H.A.J. IN DEN BOSCH.

turbed by erosion effects. Farther inland they are present in the form of garrigues, rock castle landscapes, on the slopes of river valleys, clearings in forests, complete deforestations, and on scarps along roads. In cultivated land the lizard inhabits fallow and cleared areas, scarps covered with scree and insular ruderal flora, and rubble dumps of abandoned mining operations. Provided there are ruderal and fallow areas it also occurs in the vicinity of human settlements. Within the capital Lisboa it could still be observed in the area of the Hipodromo do Campo Grande in 1981.

The areas occupied by *Psammodromus hispanicus* are for a large percentage unsuited for agriculture. The species is therefore endangered mainly in places where its habitats are included in expansive reforestation and urbanization projects (in particular in the coastal zone), or where an increasingly dense vegetation cover replaces a formerly moderately intense form of agriculture and so amounts to a restructuring of the habitat. Such reductions also affect dune areas in places where the extremely invasive succulent plant *Carpobrotus*, introduced from South Africa, is allowed to expand to form a closed cover on entire dune fields.

**References:** BARBADILLO et al. (1999), BOSCH (1986), CARRETERO et al. (19997), CRESPO (1972, 1974a, 1975), CRESPO & OLIVEIRA (1989), DIAS et al. (1983), FARIA (1991), FERRAND DE ALMEIDA & FERRAND DE ALMEIDA (1986), FERRAND DE ALMEIDA et al. (2001), GLANDT et al. (1998), GODINHO et al. (1999), MALKMUS (1979a, b, c, 1981b, 1982a, 1983c, 1984b, c, 1985a, b, c, 1987c, 1989a, b, 1991c, e, 1992b, 1995a, 1997a, b, 1999a, 2002, 2002b, 2003a), MALKMUS & SCHWARZER (2000), MARQUES et al. (1995), MEEK (1983), PARGANA et al. (1996), PENA et al. (1985), RAIMUNDO (1995), SALVADOR (1981a), SCHWARZER (1996, 1997c).