

Comments on *Passer italiae* (Vieillot 1817)

by Bruno Massa

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Mayr (1963) and Johnston (1969) considered *Passer italiae* a stabilised hybrid between *P. domesticus* and *P. hispaniolensis*. Apart from Italy, forms phenotypically belonging to *P. italiae* live in Corsica, some oases of Algeria, Tunisia and Lybia, and in the isle of Crete. A clinal variation has been observed in the Italian peninsula, where first Bertani (1944) and subsequently Johnston (1969) and Lo Valvo & Lo Verde (1987) have observed a southward decrease in the wing length. Furthermore the same 3 authors pointed out that *hispaniolensis* characters increase southward along the Italian peninsula, Sicily and Maltese Islands.

While Johnston (1969), nevertheless, proposes that *P. italiae* be recognised as a full species, Summers-Smith (1978) considers *P. italiae* as a subspecies of *P. hispaniolensis* on the basis of phenotypical and behavioural characters. Baumgart (1984), agreeing that *P. italiae* and *hispaniolensis* are conspecific, points out that *hispaniolensis* (Temminck 1820) is a junior synonym of *italiae* (Vieillot 1817), and proposes the new arrangement *P. italiae italiae* and *P. italiae hispaniolensis*, a proposition which has been overlooked in the recent book by Summers-Smith (1988), who there still considers *italiae* to be a subspecies of *hispaniolensis*.

Lo Valvo & Lo Verde (1987) agree with Johnston (1969) that *P. italiae* is a full species, but they prefer to regard the Sicilian and Maltese populations as *P. hispaniolensis*. Electrophoretic analysis by Brown *et al.* (1970), indeed, confirmed that Sicilian and Maltese populations are taxonomically very close to each other.

Some authors (e.g. Baumgart 1984, Summers-Smith 1988), who regard *P. italiae* as a subspecies, also regard it as closer to *hispaniolensis* than to *domesticus*; they advance the hypothesis that hybridization between *P. domesticus* and (migrant) *P. hispaniolensis* accounts for the *italiae*-like sparrows in Crete, Yugoslavia and in the oases of North Africa, where a complete range of intermediates between *domesticus* and *hispaniolensis* has been noticed (Summers-Smith & Vernon 1972, Metzmacher 1986a,b); but, as Metzmacher (1986a) observes, it is unlikely that the same phenomenon can be explained in 2 different ways: an *italiae*-like sparrow cannot be a subspecies in the Italian peninsula and a hybrid in other areas.

Summers-Smith (1988) points out that the kind of intergradation southward in the Italian peninsula is typical of a subspecies, whereas he cites a sharp transition at the northern boundary to demonstrate that *italiae* and *domesticus* are different species. The existence of this intergradation was noted earlier by Bocchi *et al.* (1960); they concluded from their blood groups that Sicilian sparrows are hybrids between *hispaniolensis* and *italiae*, some Sicilian individuals sharing the same antigen pool with north Italian sparrows. Moreover it seems that in the northern part of *italiae*'s breeding area a true isolation between *italiae* and *domesticus* in fact does not exist. Schifferli & Schifferli (1980) indeed report a hybrid area, 30–35 km wide, of freely interbreeding *domesticus* and *italiae*; a

possibly even wider hybrid zone is given for *italiae*'s western boundary in France (Lo Valvo & Lo Verde 1987, Summers-Smith 1988) and also for its eastern boundary in Austria and Yugoslavia (Summers-Smith 1988). In addition, occasional *italiae*-like hybrids are reported from zones where *domesticus* and *hispaniolensis* overlap (Summers-Smith 1988), while Alonso (1984), hybridizing *domesticus* × *hispaniolensis*, obtained a *fluckigeri*-like sparrow, one of the *italiae*-like intermediates.

Lastly, Thibault (1983) reports hybrid populations of *hispaniolensis* × *italiae* in the south of Corsica, certainly resulting from the immigration of *hispaniolensis* from Sardinia.

Some authors (Stephan 1984, Metzmacher 1986b) have pointed out that there is individual variation of several plumage traits and Lo Valvo & Lo Verde (1987) that the plumage varies between different seasons. Phenotypical analysis should therefore be carried out following identical criteria for each individual for all the *italiae*-like populations, for those living in Italy as well as in Corsica, Crete or N Africa. Such a study in the past in many cases may have been not entirely objective and the conclusions dependent on the methodological approach. The conclusion of Summers-Smith (1978, 1988), for example, that Maltese Sparrows show both *hispaniolensis* and *domesticus* characters could depend on the fact that he visited Malta only in October, at a time when *hispaniolensis* plumage has the widest variation, especially as regards the black streaks on the flanks and the head colour. It is possible, as well, that the 4 samples examined by Metzmacher (1986a) from some oases of Algeria could have given more precise results on the degree of hybridization if the analysis period had been restricted to specimens obtained in the spring-summer months only.

Finally, even if it is true that hybridization between *domesticus* and *hispaniolensis* could have originated from immigrations of *hispaniolensis* (and *hispaniolensis* is certainly more of a wanderer than *domesticus*, having been recorded as far away as Great Britain—Charlwood & Britton 1981, Waller 1981), the suggestion that, on the other hand, *domesticus* may have invaded zones where *italiae* breeds, and *vice versa*, cannot be dismissed. Thibault (1983), for example, reports for Corsica some records of typical *domesticus* and also of hybrid *domesticus* × *italiae*, while Le Grand (1977) records the colonisation of São Miguel (Azores) by *domesticus*, certainly originating from the isle of Terceira, c. 130 km away. Evidently *domesticus* may at times disperse as distinctly as *hispaniolensis*.

Summers-Smith (1988: table 50) also suggests that *italiae* could be regarded as a semispecies; but this term was, in fact, used by Mayr (1963) to define the allopatric species of which a superspecies is composed. So, even if we could consider *domesticus* and *hispaniolensis* as semispecies of the Linnean superspecies *domesticus*, this term does not fit specimens from the hybrid strip or intergradation zone (*italiae*). More coherently Lo Valvo & Lo Verde (1987) propose regarding *italiae* as an "emergent interspecies" (*sensu* Vuilleumier 1976), i.e. a species very close to others whose breeding areas it overlaps and where hybridization may be shown.

Therefore, as previously pointed out, the taxonomic problem of *italiae*-like sparrows, described as "somewhat of a taxonomist's nightmare" (Waller 1981), cannot be solved merely by phenotypical analysis, and no

proposal resulting from traditional taxonomic approach can now be genuinely accepted.

In conclusion, while waiting for genetic studies in depth on hybrid *italiae*-like populations in comparison with 'accepted' sparrow species, researchers must avoid causing new complications in sparrow nomenclature. I propose that the *italiae*-like Sparrows be recognised as stabilized hybrids between *domesticus* and *hispaniolensis*, and that the useful specific rank, *P. italiae*, as proposed by Johnston (1969) be maintained.

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