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PYRGUS COMMUNIS AND *P. ALBESCENS* (HESPERIIDAE) IN NEVADA

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ABSTRACT. Based on more than 500 male genitalia, the *Pyrgus communis* phenotype replaces the *P. albescens* phenotype latitudinally and elevationally in Nevada. Intermediates are known where their distributions meet and overlap.

The status of *Pyrgus communis* (Grote) and *Pyrgus albescens* Plötz (Hesperiidae: Pyrginae) has been in question up to the present. They have been treated as separate species, as subspecies, or neither (Tilden 1965). Even the most recent regional and taxonomic treatments vary. They were considered subspecies of *P. communis* by Stanford (*in* Ferris & Brown 1981) but as full species by Miller and Brown (1981). The two taxa are often segregated by ecology and geography but there are areas of sympatry or near sympatry in southwestern United States and adjacent Mexico. In some latter areas, intermediates are known (Tilden 1965). In others, they are said to occur in close proximity, but no mention is made of intermediates (Ferris 1976, Stanford *in* Ferris & Brown 1981, Holland 1984); some workers have never seen an intermediate (Ferris, H. A. Freeman, pers. comm.). The present paper summarizes their status and distribution in Nevada.

More than 500 male adults from Nevada in the Nevada State Museum and in the author's collection were examined. The left valva of each was classified into one of three configurations, the variations of which are indicated in Fig. 1. These were assigned to *P. albescens*, *P. communis*, and intermediate, and their distributions were mapped.

The valvae of individuals assigned to nominate *P. communis* have a long and recurved dorsal process terminating in two sharply pointed prongs (Fig. 1). The lengths of the dorsal process and the prongs vary. On some individuals, one of the prongs is shorter than the other; on most they are equal. The valvae of individuals assigned to *P. albescens* have no dorsal process but usually have a single, short prong anterior to the tip (Fig. 1). Intermediates show various degrees of development in the dorsal process and the double prongs (Fig. 1). There was no difference in wing pattern between the genitalic phenotypes; their seasonal variation is likewise identical.

Individuals of the *P. communis* phenotype occur throughout Nevada (Fig. 2); those of the *P. albescens* and intermediate phenotypes occur in southern Nevada except for one *P. albescens* from Carson City (Fig. 2). At most stations where *P. albescens* were taken, inter-

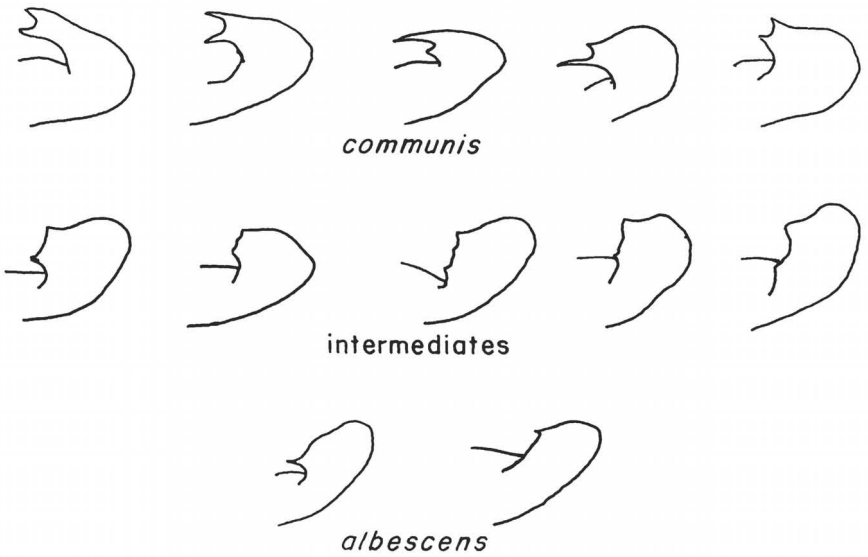

FIG. 1. Variation in the left valvae of *Pyrgus communis* in Nevada.

mediates and *P. communis* were taken also. Individuals with intermediate valvae occur only within the range of *P. albescens*. There is no strict ecological or elevational segregation in southern Nevada, but phenotype proportions do vary. The *P. albescens* phenotype dominates at lower elevations and latitudes. Intermediates and *P. communis* become more prominent with increase in elevation and latitude (Table 1, Fig. 2). In the Newberry Mountains, Las Vegas Valley, and the lower slopes of the Spring Mountains, *P. albescens* accounts for more than 60% of the individuals, and *P. communis* for less than 6%. At moderate elevations of the Spring Mountains, there is an increase in the *P. communis* phenotype and at the higher elevations and in Moapa Valley, intermediates predominate.

The Nevada distribution is compatible with that previously noted

TABLE 1. Proportion of *P. albescens*, *P. communis* and intermediate phenotypes from different locations in southern Nevada.

Location	*P. albescens*	Inter-mediate	*P. communis*	N
Newberry Mountains (<1,200 m)	60	36	4	25
Las Vegas Valley (600–900 m)	62	33	5	21
Low slopes, Spring Mts. (<1,500 m)	65	29	6	17
Mid elevations, Spring Mts. (1,500–2,100 m)	57	24	19	84
High elevations, Spring Mts. (>2,100 m)	20	60	20	15
Moapa Valley	34	48	18	91

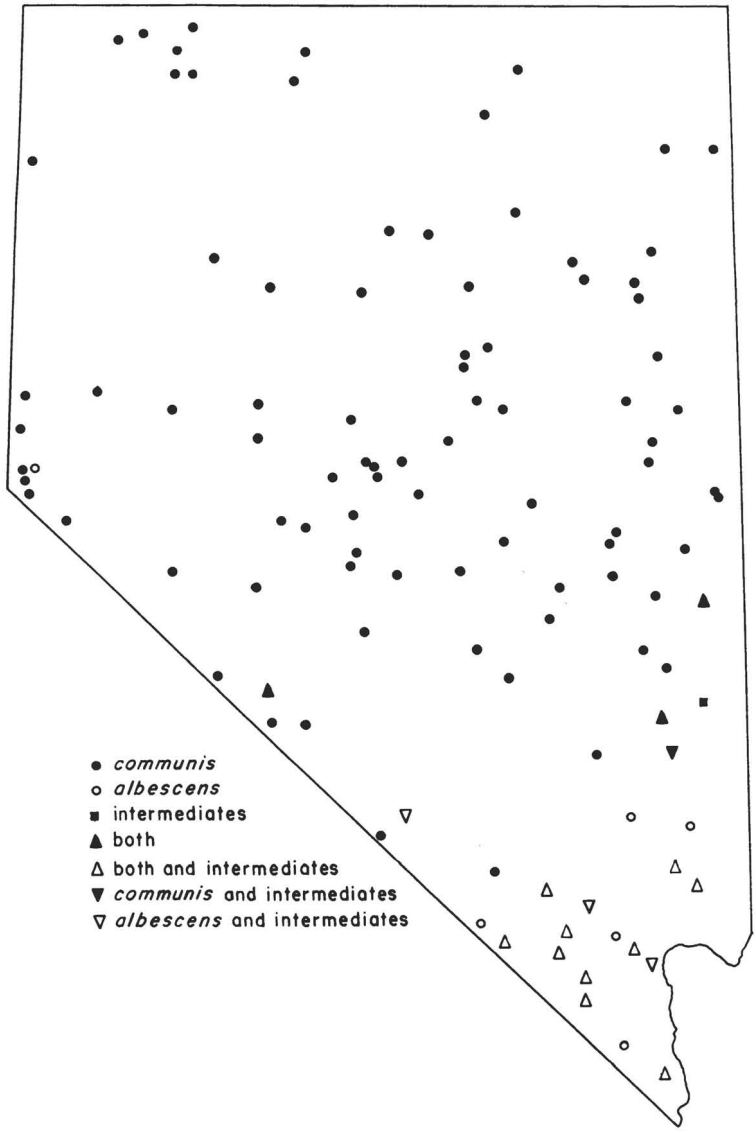

FIG. 2. Distribution of *Pyrgus communis* in Nevada.

(Tilden 1965) for *Pyrgus communis*; the latter is a more northern and higher elevation phenotype, *P. albescens*, a lower-elevation and more southerly phenotype. Intermediacy, at least in southern Nevada, is greater than previously reported. This indicates that the two phenotypes are closely related, and are probably no more than allopatric subspecies of *Pyrgus communis*.

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