serve a communicatory function, as has already been demonstrated for *P. lydia* by M.E. JACOBS (1955, *Ecology* 36: 566-586).

Because dragonflies are well known to be capable of seeing U.V., I examined the reflectance of these and other structures using a spectrophotometer (Fig. 1). Clearly pruinosity strongly reflects U.V., often more strongly than light in our visible range. There might be a difference between that exuded on the body and

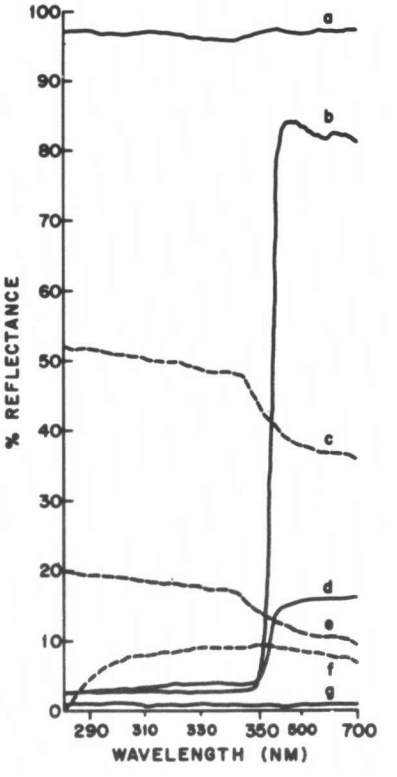


Fig. 1. U.V. reflectance of various odonate structures. (a) $BaSo_4$ standard (Eastman Kodak white reflectance coating); (b) white enamel "Humbrol" paint; (c) pruinose male abdomen dorsum; (d) white female pterostigma; (e) pruinose male thorax; (f) pruinose male wing band; (g) dark wing band. Note that wavelength scale changes at 350 nm.

## PRUINOSITY IN ODONATES REFLECTS U.V.

During the summer of 1983 I noticed that the males of the four most common libellulids at my study pond in the University of Wisconsin Arboretum, Madison had clearly different colour patterns, partly involving the distribution of pruinosity. *Pachydiplax longipennis* has a lightly pruinose abdomen dorsum and clear wings; *Plathemis lydia* has a heavily pruinose abdomen and a black band on the wings; *Libellula luctuosa* has a dark abdomen and single black and pruinose bands on the wings; and *Libellula pulchella* has a lightly pruinose abdomen and three black and two pruinose patches on each wing. This patterning suggests that in addition to possible excretory and thermoregulatory functions, pruinosity may

wings. Other white coloration on odonates may not reflect U.V. as illustrated by the pterostigma of *Calopteryx maculata* females. I suggest that wherever it is found, a possible communicatory function involving U.V. reflectance be considered for pruinosity.

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