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No differentiation for cyanogenesis with respect
to aspect in Lotus corniculatus

Two years ago we reported a pair of populations in which the south-facing population contained more cyanogenic plants than the north-facing one (Lotus Newsletter 7). This was an error since our north aspect sample took in a large proportion of plants of an acyanogenic species L. uliginosus.

Data accumulated over the last four years for a number of paired populations show only one significant difference between north and south aspects (Table 1) - and that in favour of the north aspect.

TABLE 1

Site	Year	Percent cyanogenic plants			
		North aspect		South aspect	
		%	Number	%	Number
Leckhampton Hill	1977	79	57	75	51
Notgrove 1	1975	61	131	43	80
Notgrove 2	1975	52	123	49	127
Notgrove 3	1975	58	85	29	41
Painswick Beacon 1	1976	82	50	75	52
Painswick Beacon 2	1976	84	50	67	57
Painswick Beacon 3	1977	80	51	80	54
Robins Wood Hill	1975	91	55	96	46
Crickley/Birdlip Hills	1978	54	113	58	116
Cleeve Hill (Postlip side)	1978	54	112	44	100
Silbury Hill	1960	18	28	14	91

The Silbury Hill figures are from the unpublished data of D.A. Jones. Notgrove 1, 2 and 3 are different sampling points within a railway cutting and Painswick 1, 2 and 3 separate ramparts of a pre-Roman fort. Several of the sites have been sampled on more than one occasion, usually with little change in cyanogenic plant frequencies. The Silbury Hill popu-

lations became extinct in the early 1970's and the Notgrove south aspect populations were killed off by the 1976 drought.

Field measurements have shown that there are lower temperatures and longer ground-frost cover at several of the north aspect sites as compared with the south-facing ones. One explanation of Table 1 is that temperature has little or no effect in causing differentiation between populations but it is also possible that a temperature effect is counterbalanced by the observed lower soil water content on the south aspects.