

Assessment of the Scottish population of *Lychnis alpina* (Alpine Catchfly)

FRANCIS Q. BREARLEY, *Department of Environmental and Geographical Sciences, Manchester Metropolitan University, Chester Street, Manchester, M1 5GD* (f.q.brearley@mmu.ac.uk)

Lychnis alpina (Alpine Catchfly) is a small, rosette-forming, perennial plant with an amphiatlantic distribution. In the U.K., it is found at two sites: Hobcarton Crag in the English Lake District and at Meikle Kilrannoch (MK) in the eastern Cairngorms of Scotland. The MK site has two outcrops of ultramafic rocks that have given rise to a well-known serpentine plant community over soils low in major plant nutrients and very high in magnesium and nickel (Proctor *et al.*, 1991; Nagy & Proctor, 1997). On the northern outcrop is a large (thousands) population of *L. alpina*, whereas the southern outcrop, which is about 1km away, has a much smaller (tens) population. The populations were assessed in 1986 by Proctor *et al.* (1991) and found to be 68,000 and 46 respectively. Given that *L. alpina* is rare in the U.K. and is on the BSBI Threatened Plants Database (VU-D2), it was considered prudent to re-assess the populations and determine any potential changes since the last assessment. Therefore on 17-18th August 2007, I set up a series of 210 1m² quadrats spaced regularly across the northern outcrop (MK1) and counted all individuals of *L. alpina* within each quadrat. A total of 463 plants were recorded, the majority (89 %) of which were found in quadrats predominantly over serpentine debris soils where their mean density was 7.9 plants/m². The remainder of the plants were found in quadrats dominated by grass- or dwarf shrub-heath where their mean density was 0.3 plants/m². Given that the total area of MK1 is 3.5ha, this gives a total population of 77,200 plants, indicating a slight increase since the last assessment. However, minor fluctuations in

numbers are equally likely due to the random nature of the placing of quadrats. On the southern outcrop (MK2) I counted all individuals in its western quarter and found 141 plants. The MK2 population appears to be increasing in size, as Proctor & Woodell (1971) did not find any individuals, Proctor & Johnston (1977) found a single plant in 1976 and Proctor *et al.* (1991) noted 46 plants in 1986. I collected leaves (under license from Scottish Natural Heritage) from a small number of plants that will be used to assess genetic diversity within these, and the English, populations.

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