PIGMENT RESOURCES REPORT

Excavations at Sand, Applecross 2000

The finds

One purplish-grey nodule of haematite and one mudstone with an earthy-orange limonite cortex were identified from the excavations.

Possible origins

Iron bearing rocks and minerals including haematite and magnetite are found in the surrounding geology at Sand; in both the Sleat Group and the Applecross Formation of the overlying Torridon Group. Haematite is also found in the sediments around Diabaig (Stewart 1991, 73 & 79).

Interpretation of use-wear

Use-wear evidence reveals that both finds were primarily exploited and reduced for their pigment. Various use-wear techniques are apparent on each of the nodules; rubbing down or levigating against a hard surface and gouging or scoring using a sharp point.

Although the haematite nodule is dull in outward appearance it should be noted that its streak is orangey-red. Its fashioned surfaces provide evidence that fine, red spectrum pigment was created, which must have been as incredible to discover in the past as it is today (Isbister 2000,192-3). Wet abrasion against a pebble was used to work the pigment material from the haematite nodule's largest face, which is evidenced by its surface texture and convex shape.

Experiments show that rubbing down a crystalline haematite nodule in water, against a rounded sandstone pebble, produce a smooth curved nodule face and in the process create fine, brightly coloured material with a tacky paint-like consistency. Rubbing down the nodule in viscous clear liquid cushions the simultaneous grinding and binding process and enables smaller pigment particles to scatter creating even finer, brighter pigment and a smoother nodule face. Both of these techniques may have been used. Fine orangey-red pigment was also produced from the burnished narrow edge-ground facet on the haematite nodule. It is unclear whether coloured pigment was worked wet or dry from the facet and rubbed areas on the limonite nodule.

A bone or flint tool was probably used to scrape the haematite and limonite from the nodules. A sharper point was used to score the limonite cortex which produced earthy-orange, dry pigment powder. Dry crystalline haematite pigment adheres to the fingers like powdered graphite and appears bright orange and translucent when rubbed on the skin. Dull, hydrated limonite pigments are often heated to obtain colour variations, as they were in the painted caves of Lascaux, and to realise purer red oxide pigments (Mayer 1991, 76-7). Experimental work has shown that dry pigment powder mixed with water does not create pigment material as fine as that produced by the more efficient wet abrasion techniques described above.

Possible applications

These precisely applied abrasion and scoring techniques demanded concentrated preparation and I suspect their intended applications were equally focused.

Paints, chalks and cosmetics for personal adornment and artefact decoration are possible interpretations and the colour and healing properties of these pigments may have been also known and used (Isbister forthcoming). Ethnography tells us that the brilliance of colour was often used as a sensory stimulus to evoke spiritual or ritual power (Morphy 1989, 30). In traditional cultures colour and cosmetics are infused with symbolism and meaning; the word “cosmetics” comes from the Greek, “cosmos” meaning order (Power 1999).

It is also possible that excavated haematite nodules and pigment may have been associated both symbolically and practically with blood, the feminine and medicine. Its antiseptic qualities and ability to staunch bleeding is attested by both ancient and modern traditions (Isbister: 2000, 194). The Gugadja people in north-western Australia used haematite pigment as a medicine; after having moistened it with water or saliva it was applied to sores and burns and also used to treat internal pains (Rudgley 1999, 177). Clearly, there is no reason not to believe that and the healing properties of minerals were known in Mesolithic Scotland.

Chinese Traditional Medicine still uses haematite and limonite in the treatment of diseases and has done so for more than 5,000 years. It employs the healing properties of herbs, minerals and other natural materials and considers that every disease can arise from and/or influences our emotional state. Haematite is finely ground in water or vinegar for oral administration and is commonly used with limonite, oyster shell and white peony root. In light of the large amounts of burnt marine shell excavated from Sand it may be worth noting that calcined oyster shell and haematite are used as a major combination in preparations. Haematite and oyster shell are also used as sedatives to effectively calm the mind and spirit (Reid 1987, 120-4). Various other treatments using haematite

include prolonged menstruation, nasal bleeding, infantile malnutrition, vomiting and belching, bronchial asthma and lacerations (Bensky & Gamble 1990, 578).

Evidently, so few samples make specific interpretations problematic and it should therefore be concluded that these pigment resources may have been equally used for their colour and healing properties and possibly both at the same time.

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