



## **Foraminifera from Restronguet Creek: monitoring recovery from the Wheal Jane pollution incident.**

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In 1992, following a period of heavy rainfall, acidic mine water escaped from Wheal Jane and severely polluted the River Carnon, Restronguet Creek and the Carrick Roads (Fal Estuary). From June 1992, for a period of over three years, Dr Sheila Stubbles conducted a programme of sampling in the inter-tidal sediments of Restronguet Creek in order to document the disruption to the foraminiferal fauna, the geochemistry of the surficial sediments and the chemistry of the water still entering the estuary. Since that time an extensive water treatment system has been installed that uses a series of “natural” filters. In 2004 this monitoring programme was re-activated using the same sites, the same sampling techniques and the same methodology. It was anticipated that there should be a noticeable recovery of the microfauna. Using samples from January, April and early July we sampled across the spring bloom and have compared both the species content and abundances with the data generated in the early to mid-1990s. While the balance of taxa has changed slightly the species content remains the same, with no new taxa recorded. Particularly significant is the lack of typical estuarine taxa such as *Trochammina*, *Jadammina* and *Massilina*. The living fauna is dominated by *Haynesina germanica*, *Elphidium williamsoni* and *Ammonia aberdoveyensis*. The geochemistry indicates that the surface muds are now approaching pre-Wheal Jane incident levels, though still containing metals as a result of the natural environment of the catchment. Test deformity is reduced, though still present.