Scopelophila cataractae
Tongue-leaf Copper-moss

Identification  
*Scopelophila cataractae* forms dense patches or tufts that may be deep (more than 5 cm), but are often less well-developed and sometimes only appear as very short, leafy shoots amongst more extensive, protonemal growth. The bright to olive-green, rather glossy leaves are 1–1.5 mm long, and become reddish-brown or bronzed with age and in more exposed sites. Leaves are distinctly keeled, broadest just above the middle and taper to an acute tip, with the strong nerve ending in the tip or shortly excurrent. Capsules are unknown in Europe, where only male plants have so far been found. This species is easy to overlook, particularly when poorly developed, and is as easily recognizable by its restricted habitat as by any other feature.

Similar species  
*Didymodon tophaceus* (p. 466) may form dense tufts of a similar colour, but its leaves taper from the base, with a distinctly rounded tip, and lack the distinct keel of *S. cataractae*. The most abundant, turf-forming moss on metalliferous mine waste, *Weissia controversa* var. *densifolia* (p. 422), has a narrower, less keeled, more opaque leaf, with inrolled margins. Its leaves are crisped when dry, and it frequently bears capsules. *S. cataractae* could easily be confused with non-fruiting *Barbula convoluta* (p. 454), although it is usually yellow-green rather than olive-green, and it is best to microscopically examine plants from ground rich in zinc.

Habitat  
Present only on the most toxic, zinc-rich substrates, usually where very moist, on seepages and areas of percolation associated with derelict metal-processing buildings or metal-rich spoil, or the banks of streams running through them. Sometimes it occurs, perhaps ephemerally, on drier tracks at metalliferous sites, where fragments of leaves or protonemal gemmae have been carried. It can withstand considerable shade, persisting mainly as protonemal mats.

Photos David Holyoak Text Fred Rumsey