sponge, the *Coscinopora globularis*, D'Orb., from the chalk, but does not feel quite satisfied about their artificial dressing. Some specimens do certainly appear as though the hole had been enlarged and completed (Prestwich 1859: 52).

Although the lithics Boucher de Perthes had reported were eventually accepted by a hostile discipline, his Acheulian beads were promptly forgotten and remained ignored for the following one and a half centuries. Late in the 19th century, Smith (1894: 272–276) excavated about 200 identical items from an Acheulian site at Bedford, England. He described these as being of the same species and showing identical artificial enlargement of the natural orifice. Smith was certain that his specimens were used as beads, but he made no mention of the French finds, which by that time had apparently been forgotten. Keeley (1980: 164) examined some of the English sample and confirmed that there is no doubt that their perforations were modified, and Marshack (1991) thought to detect organic residues in the holes of a few of these apparent beads.

Globular Porifera Specimens

Intrigued by these vague and unconnected reports I examined 325 specimens, labelled as *Coscinopora globularis*, and ten further perforated objects, all collected before the early 20th century, and subjected them to detailed microscopic study. This material is listed in Appendix 1. Although much of it, if not most, is probably of the Acheulian, I shall focus here on the specimens collected in the Biddenham quarry at Bedford, England, acquired by the Pitt Rivers Museum in 1910 (Fig. 3). This is the only part of the collection accompanied by clear Acheulian stone tools. Appendix 2 lists fifteen of these Bedford specimens for detailed description.

It is of significance that these and other similar objects have been incorrectly identified since the 1850s. All of them appear to be of the species *Porosphaera globularis* Phillips 1829, a Cretaceous sponge. The importance of this lies not in knowing the true attribution but in the consequences of this fact concerning the cognition of the hominids that collected these objects. The genus *Coscinopora* is a lychnisc hexactinellid sponge, for instance *Coscinopora infundibuliformis* Goldfuss 1833 is funnel or cup shaped, with a distinctive stem. It belongs to the order Lychniskida of the class Hyalospongiae, whereas *Porosphaera* is of the Pharetronida, one of the two orders of the Calcispongiae. Therefore, the species are not even closely related. However, even *Porosphaera globularis* is only rarely of truly globular shape, its specimens are of considerable morphological diversity. The species occurs primarily in northern France, United Kingdom, Germany, Denmark, and Poland.

Porosphaera globularis has been misidentified on other occasions, including as *Achilleum globosum* by Hagenow in 1839–40, and as both *Ceriopora nuciformis* and *Achilleum globosum* by Quenstedt in 1881. Its shape is not diagnostic, it is recognised primarily by its surface and internal structure, consisting of radially arranged channels separated by sclerous four-rayed carbonate walls of spicula. These channels connect to surface pores

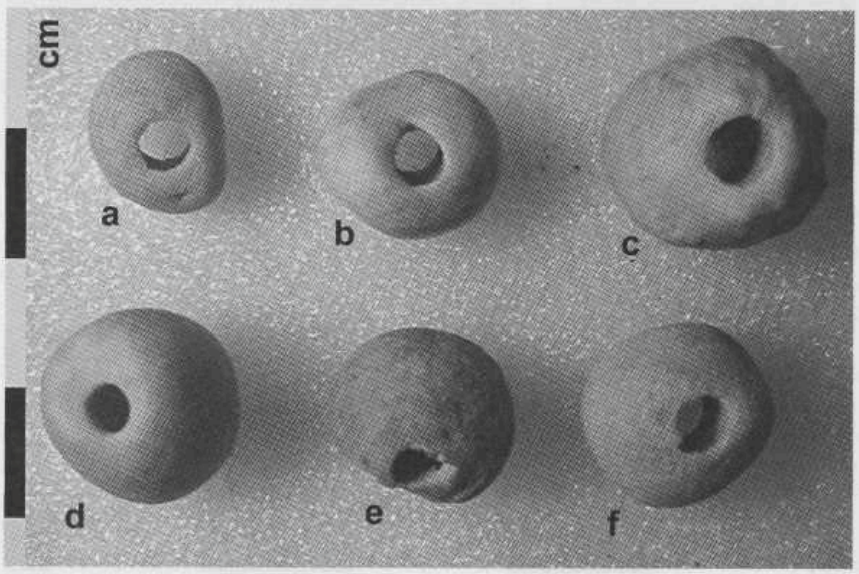

Fig. 3: Six of the Acheulian specimens of *Porosphaera globularis* examined in this study. Note the very heavy wear that resulted in a distinct wedge shape on (b), the thin centric wear facets on (a) and (c), and the light-coloured, distinctly asymmetric major wear facet on (d). Specimen (e) is fractured, and (f) shows very little use-wear.