Island Sylt, and at Bersenbrück north of Osnabrück, in Westphalia, where it was first discovered by F. Römer. It is also said to occur at Bocholt, and other points in Westphalia; on the borders of Holland; also at Crefeld and Dusseldorf. Not having visited these localities, I can offer no opinion as to the agreement in age of the several deposits here enumerated.

Vienna basin.—In South Germany the general resemblance of the shells of the Vienna tertiary basin with those of the faluns of Touraine has long been acknowledged. In Dr. Hörnes' excellent work, recently commenced, on the fossil mollusca of that formation, we see figures of many shells of the genus *Conus*, some of large size, clearly of the same species as those found in the falunian sands of Touraine. M. Alcide d'Orbigny has also shown that the foraminifera of the Vienna basin differ alike from the Eocene and Pliocene species, and agree with those of the faluns, so far as the latter are known. Among the Vienna foraminifera, the genus *Amphistegina* (fig. 163) is very characteristic, and is supposed

Fig. 163.

Amphistegina Hauerina, D'Orb. Vienna, miocene strata.

by Archiac to take the same place among the foraminifera of the Miocene era, which the Nummulites occupy in the Eocene period.

The Vienna basin is thought by some geologists to comprise tertiary strata of more than one age, the lowest strata reached in boring Artesian wells being older than the faluns.

Piedmont.—Switzerland.—To the same Miocene or "falunian" epoch, we may refer a portion of the strata of the Hill of the Superga near Turin in Piedmont,* as also part of the Molasse of Switzerland, or the greenish sand which fills the great Swiss valley between the Alps and the Jura. At the foot of the Alps it usually takes the form of a conglomerate called provincially "nagelflue," sometimes attaining the truly wonderful thickness of 6000 and 8000 feet, as in the Riga near Lucerne and in the Speer near Wesen. The lower portion of this molasse is of freshwater origin.

Scotland.—Isle of Mull.—In the sea-cliffs forming the headland of Ardtun on the west coast of Mull, in the Hebrides, several bands of tertiary strata containing leaves of dicotyledonous plants were discovered in 1851 by the Duke of Argyle.† From his description it appears that there are three leaf-beds, varying in thickness from $1\frac{1}{2}$ to $2\frac{1}{2}$ feet, which are interstratified with volcanic tuff and trap, the whole mass being about 130 feet in thickness. A sheet of basalt 40 feet thick covers the whole;

* See Sig. Giov. Michelotti's works. † Quart. Geol. Journ. 1851, p. 89.