formerly regarded as jade, is known as bowenite, having been named by J. D. Dana after G. T. Bowen. The original bowenite came from Smithfield, Rhode Island, U.S.A., and a similar mineral was described by General C. A. McMahon as occurring in Afghanistan, where it is carved for ornamental purposes in the belief that it is jade (*q.v.*)*.* Many common carvings regarded as jade are really serpentine, and therefore soft. Serpen­tine of columnar or coarsely fibrous form is termed picrolite, a name proposed by J. F. L. Hausmann from the Greek *πικρόs* (bitter) in allusion to the presence of magnesia. The finely fibrous serpentine is called chrysotile from the lustrous yellowish colour which it usually presents (χprσos, gold; τfλos, fibre) and this variety is extensively worked, especially in Canada, for use as asbestos (*q.v.*). In order to avoid confusion between the words chrysotile and chrysolite, it has been proposed by Dr J. W. Evans that the fibrous serpentine should be distinguished as karystiolite—a modification of the ancient name, taken from its occurrence near Karystos in Euboea. Foliated serpentine is usually termed marmolite—a name given by G. T. Nuttall, from *μαρμαίρω* (to glisten) in reference to its lustre. A thin lamellar or flaky serpentine supposed to occur in the Antigorio valley north of Domodossola in Piedmont is called antigorite, having been named in 1840 by Μ. E. Schweizer, after whom a somewhat similar mineral is termed schweizerite. Antigoríte has been studied by Professor T. G. Bonney and Miss C. Raisin *(Quart, Journ, Geol, Soc,,* lxi., 1905, p. 690; lxiv., 1908, p. 152). An apple-green translucent serpentine passes under the name of williamsite, having been so called by C. U. Shepard in honour of its discoverer L. White Williams, of West Chester, Pennsyl­vania, where this variety occurs.

“ Common serpentine ” is the impure massive kind which occurs in rock-masses and is extensively worked as “ serpentine- marble.” It is sometimes veined with steatite, or magnesite, and may contain scattered crystals of diallage, bronzite or bastite (an altered rhombic pyroxene), which by schillerization may present a metallic lustre. In England the chief localities of serpentine are in Cornwall, especially in the Lizard district, where it is quarried and carved into mantelpieces, columns, vases and other ornaments. Much of it presents a rich red or brown colour, often mottled and sometimes veined. Professor Bonney has shown that it has been largely derived from olivine. Green serpentine occurs near Holyhead in Anglesey. A beautiful serpentine, generally mottled red and green, with veins of steatite, is found at Portsoy in Banffshire, Scotland, and was used for pillars in the great ball at Versailles. Serpentine con­taining chromite is found in the Shetland Islands.

The rock called “ ophicalcite ” consists of an intimate associa­tion of serpentine with limestone, often forming an ornamental stone which is beautifully clouded and zoned with various shades of green. It generally results from the metamorphism of an impure dolomitic limestone, the impurities having crystallized as new minerals which become altered to serpentine. Pseudo- morphs of serpentine occur after forsterite. The best known serpentinous marble of the British Isles occurs in Connemara in Galway, Ireland, and passes in trade under the name of “ Irish green.” Ophicaícites are developed also in various parts of Scotland, and the green pebbles found in Iona belong to this type of rock. The famous eozoonal marble of Canada is also of similar character.

In Saxony common serpentine is largely worked at Zöblitz near Marienberg and Waldheim. The rock of Zöblitz, mentioned by G. Agricola in the 16th century, is usually of dull green or brown colour, and frequently contains dark red Bohemian garnet or pyrope (*q.v.*). It was used in the mausoleum of Prince Albert at Frogmore, Windsor, and in Abraham Lincoln’s monu­ment at Springfield, Illinois, U.S.A. Italy is rich in serpentine, the best-known being the *υerde di Prato,* which has been quarried for centuries at Monteferrato near Prato in Tuscany, and has been largely used in ecclesiastical architecture in Florence, Prato and Pistoja. Much serpentine is found near Genoa and Levanto. The *verde di Pegli* comes from Pegli not far from Genoa, while the *verde di Genova* is a brecciated serpentinous

limestone from Pietra Lavezzara. Serpentine occurs also at many localities in the Apennines, in Elba and in Corsica. The term ophiolite has been vaguely used to include not only serpen­tines but many other rocks associated with the Italian serpen­tines. *Verde anlico* is a brecciated serpentine with fragments of limestone, originally brought by the Romans from Atrax in Thessaly, and called *lapis atracius,* It is sometimes known as *vert antique,* or, following the old French, *verd antique.* The term serpentine is often improperly applied to the ancient green porphyry of Laconia in the Peloponnesus *(porfido serpentino verde),* True serpentine occurs at numerous localities in the Alps and in France, an elegant variety being quarried at Êpinal in the Vosges, whilst a fine ophicalcite is worked at St Véran and Maurins, dep. Hautes-Alpes. The Ronda Mountains in Spain also yield serpentine.

In North America serpentine is so widely distributed that only a few localities can be specified. It is found in St Lawrence county, Essex county and Warren county, New York, and also on Staten Island; at Montville and Hoboken in New Jersey; at Newport, Rhode Island; at Newbury and Newburyport, Massachusetts; Texas, Lancaster county, and West Chester, Chester county, Pennsylvania; at many localities in Vermont, and in California, Connecticut, Georgia, Maine, Maryland, Michigan, New Mexico, North Carolina and Washington.

For American serpentine see *Stones for Building and Decoration,* by George P. Merrill (New York, 1903) ; and for serpentine asbestos see the same author’s *Non-metallic Minerals* (New York, 1904).

(F. W. R.\*)

SERPENT-WORSHIP. From all parts of the world there is a very considerable body of evidence for the prominence of the serpent in religion, mythology and folk-lore. Snake- worship still prevails largely in India, and a writer in 1896 remarks that the previous census showed in the North-West Provinces over 25,000 Nãga (serpent) worshippers, 123,000 votaries of the snake-god Gūga, and, in the Punjab, some 35,000 special votaries of the snake godlings.@@1 The evidence from modern India can be supplemented by the medieval and ancient Indian sources, and, in particular, by the representations of the adoration of snake-deities on the Buddhist topes of Sanchi and Amravati.@@2 There we find, not indeed living serpents, but deities with serpent-symbolism, indicating a composition of various strata of religious belief, analogous to the evidence for serpent-symbolism from Babylonia, Crete, Greece or Peru; for the higher religions have almost invariably retained in their ritual and belief, sometimes with only slight modification, cruder conceptions which can still be studied in less elevated form among the lower races of India, Africa or America. The result is instructive when we turn to the numerous serpent myths and legends from the Old World and the New, to the stray notices in old writers, or to the fragmentary scraps of popular superstition everywhere. Modem scientific research has vividly illustrated the stereotyped nature of the human mind; there is a general similarity in the effect of similar phenomena upon people at a similar stage of mental growth; there is an almost inherent or unconscious belief which has been transmitted through the countless ages of man’s history. At the same time, apart from the gradual evolution of religious and other conceptions there are the more incidental and artificial influences which have shaped them. Hence, our evidence for serpent-cults everywhere represents varying stages in the historical development of a few related fundamental ideas which are psychologically explicable; and it is impossible to deal with the subject geographically or historically. It is most useful, perhaps, to survey some of the general features of belief as an introduction to the more complex inquiries which involve a consideration of other subjects over a larger field.

@@@1 See W. Crooke, *The Popular Religion and Folk-lore of Northern India* (London, 1896), ii. 122.

@@@2 See the elaborately illustrated work of James Fergusson, *Tree and Serpent Worship, or Illustrations of Mythology and Art in India* (2nd ed., London, 1873); also M. Winternitz, “ der Sarpabaji, ein altindischer Schlangen-cult,” in *Mitteil, d. anthrop. Gesell,* of Vienna, xviii. (1888), pp. 25-52, 250-264. Both give abundant information on the various features of serpent-cults.