early or too late usually die. Also assisting their ecological isolation, the different broods have different preferred areas; this year's brood (number X) is the most numerous and the widest ranging, being found in an area bounded by the Great Lakes in the north, New York in the east, Virginia in the south and Mississippi in the west. Three other broods will also be seen in Washington (XIV, due in 1974; II, due in 1979; and VI, due in 1983), but none so fiercely.

All in all, locusts are probably a little more complicated than just a single species divided into seventeen yearly broods. More recently, it has been suggested that there may be some six distinct species of periodic cicadas, each existing as a pair-species. That is, each may have broods with both seventeen and also thirteen year cycles. In that case, there would be a chance for the different broods to mingle, presumably one year in 221, when the thirteen year and seventeen year cycles coincide—but this is not due again until the twenty-second century.

The seventeen year cycle of the locusts was known to the American Indians and was first studied before the beginning of this century—the first brood was numbered in 1893—but this system has been subjected to surprisingly little scientific study in recent years. It provides, after all, an unparalleled opportunity to study the differences which there may be between the gene pools of a single organism existing in different ecological niches, but with the unusual factor that these niches are not necessarily separated geographically, but may be only temporarily distinct. That is, apart from year to year differences in climate, some of the various broods have the same ecological environment.

Another intriguing problem is that of how the insect maintains itself in what must be essentially a metabolically inert state for almost seventeen years. But perhaps it is not so surprising that little is known about how the locusts maintain their reproductive cycle with such unfailing regularity, for, after all, one research scientist can fit only two, at most three, locust cycles into his working lifetime.

FASHION

Swimming for Freedom

It is not just a matter of physical relief that the present 1920s look in women's clothing fashions has not been extended to swimming costumes. In any case, the evolution from the bathing costumes of those days to the contemporary garment demonstrates the metamorphosis of woman from the subordinate weaker sex to the "equal and active member of society" she is today. This at least is the thesis of Claudia B. Kidwell of the Smithsonian Institution, who has compiled a historical survey of the female bathing costume in the United States (*Contributions from the Museum of History and Technology*, p. 169. Smithsonian Institution Press, 1969).

It was the rise of the Christian Church that spelt the demise of the social aspects of bathing as practised by the Greeks and Romans, and it was not until the seventeenth century that women re-entered the water, and then only in small numbers. During the eighteenth century bathing became slowly more popular as the health-giving properties of water began to be emphasized, and by the 1800s women were being encouraged to swim. Bathing houses sprouted up wherever springs could be found, and bathing in the sea became an established pastime. However, throughout this period women paddled rather than swam and the bathing costume was designed more for adornment than use, besides which modesty demanded that it should cover every part of the female form.

Bathing dress of about 1855 (Philadelphia Museum of Art).

By slow degrees comfort as well as fashion crept into the styles until by the 1850s women were allowed to reveal themselves as bipedal, the original shapeless chemise-type gown giving way first to lace-edged pantaloons, and later to knee-length drawers worn beneath a long overdress. The skirtless bathing suit was next on the scene, but won greater popularity in Britain where bathing was segregated than in the United States where it was mixed. By the 1870s short-sleeved, low throated suits were being made and, as the century progressed and women grew more daring in the water, functional styles continued to advance. Costumes became more streamlined, trousers became kneelength, and by the beginning of this century freedom was on its way.

During the 1920s the swimming suit as opposed to the bathing suit gained ground, a trend accelerated by a growing advertising and ready-to-wear clothing industry. Women began to take the sport seriously, and though prejudice was rife a swimming costume almost recognizable as such began to take shape. When in the 1930s the desire to obtain a suntan forced costumes to become briefer and briefer, the marriage of style and utility was slowly but surely taking place. With the bikini the bathing costume has, of course, reached, if not its *ne plus ultra*, at least the end of an absorbing evolutionary track.