coastal plains known to have been built by recent sedimentation from the hills; (4) the existence of indigenous floristic elements which could develop a more mesic soil-holding vegetation; (5) the inability of such species to maintain a vegetation in the face of grazing and fire.

Reparation of a region in which soil erosion has been carried to its ultimate conclusion may demand the application of methods quite different from those where it is desired merely to reduce accelerated erosion to normal erosion. Present techniques of reforestation in this zone have not been successful and an intimate knowledge of the requirements of soil-binding species and of a complex plant succession are necessary. The problem commands the ingenuity of conservationists, and upon it hinges the greatly increased productiveness of large acreages in a country where productiveness is becoming more critical.

This consideration of soil erosion in arid Hawaii is based upon field investigations on Oahu during 1936–37 while the author was research fellow of Yale University and the Bishop Museum (Honolulu). The interpretation has been strengthened by subsequent work of the author in this and other countries. The vegetational aspects of the problem are being discussed in a manuscript now in preparation.

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CONCERNING GASTROPODS ADHERING TO FOREIGN OBJECTS

IN the discussion of *Potadoma agglutinans,* a melaniid snail from the Congo Estuary which cements itself to rocks, we stated that we knew of no other comparable case among fresh-water Gastropoda.[1] In a recent conversation, Dr. Teng-Chien Yen called our attention to the small Chinese "enigmatic shells" described by E. Lamy as *Helicostoa sinensis.*[2] It is interesting to compare this mollusk with our *P. agglutinans.* The flattened, disk-like snail of *H. sinensis* adheres by one of its faces to the free surface of immersed rocks, apparently soon after hatching. At first it is normally coiled, but the spiral eventually spreads out and becomes irregular, much as in certain species of the marine genus *Vermetus.* The mode of adherence is therefore different from that of *Potadoma agglutinans,* which remains turreted, although much deformed, and adheres only where it presses against foreign objects as growth progresses. The smaller, young snails of *Helicostoa* appear to be of two types and the largest, presumably adult snails, reach 10 to 12 mm in diameter. Lamy recognized that *Helicostoa* was operculated, but did not attempt to place it in any of the known families. More recently, Mrs. A. Pruvot-Fol described the operculum, tentacles and radula from the original material.[3] She proposed for *Helicostoa* a special family Helicostoidae, of the *Prosobranchiata taenioglossa.* She also suggested that the two forms of the young snails were the two sexes, the tentacles and radula being present only in one of them, presumably the male. It would seem to us that the soft parts and radula of *Helicostoa* agree sufficiently with those of either Valvatidae or Bulimidae (Hydrobiidae), the radula being insufficiently known to decide between the two. It is unfortunate that the precise habitat and ecology of this snail are unknown. It was described from specimens attached to a limestone rock labeled merely "Kouei-Tcheou," a city on the upper Yangtse Kiang, more than 1,200 kilometers from Shanghai. It may be surmised that the rock was immersed in swiftly running water, either on the banks of the Yangtse Kiang itself or in the rapids of one of its smaller affluents. The present note is written for the purpose of interesting Chinese naturalists in this remarkable snail. Moreover, a thorough investigation of its habitat may well lead to the discovery of other equally interesting types of rheophilous mollusks, similar to those known from the swift waters of the Congo Estuary.

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[1] *Bull. Mus. Comp. Zool.,* 88: 3, 1941.
[2] *Jour. de Conchyl.,* 70: 51–56, 1926.
[3] *Bull. Soc. Zool. France,* 62: 250–257, 1937.

ANOPHELES MACULIPENNIS MEIGEN AND ANOPHELES PUNCTIPENNIS SAY FROM NORTH DAKOTA

TWO species of malaria-carrying mosquitoes have been found in North Dakota. Specimens of *Anopheles maculipennis* were taken by the authors in fairly large numbers under a concrete bridge over a swampy marsh near Grand Forks on September 20, 1941. Additional specimens of *Anopheles maculipennis* and three specimens of *Anopheles punctipennis* were collected from the ceilings and walls of outhouses in a park near Hillsboro on the same day. The presence of these mosquitoes in the state is not surprising in view of the fact that these species are known to occur in Manitoba and the states surrounding North Dakota.

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COLLEGES AND THE CHANGING HIGH SCHOOLS

THE article entitled "Colleges and the Changing High Schools," by M. H. Trytten, under "Discussion"