younger Pliocene deposits of southeastern England, where a number of northern mollusks make their appearance. The proportion of northern species increases rapidly in the next succeeding or Pleistocene beds. The Pliocene period, therefore, embraces the long interval between the warm temperate climate of the later ages of Miocene and the cold Pleistocene time. The evidence of change of

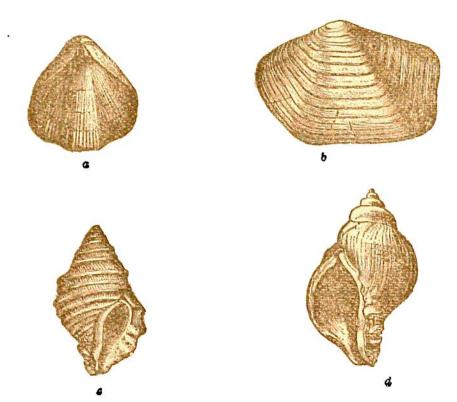


Fig. 447.—Pliocene Marine Shells.

a, Rhynchonella psittacea; b, Panopæa norvegica $(\frac{1}{2})$; c, Purpura lapillus $(\frac{1}{2})$; d, Trophon antiquus $(\frac{1}{2})$. All these species still live in the seas around Britain.

climate derivable from the English Pliocene marine mollusca may be grouped as in the subjoined table, which shows the gradual extirpation of southern and advent of northern forms in the long interval between the deposition of the oldest and newest Pliocene deposits.

⁹⁴ C. Reid, op. cit. p. 145.