was parasitized by *D. retinalis*, which supports earlier conclusions that few of the salmon caught by the Greenland fishery are from the Kapisidglit River.

PALAEONTOLOGY

Reptiles of Gondwanaland

from our Vertebrate Palaeontology Correspondent

A LARGE audience at University College, London, on December 4 heard Professor A. S. Romer give a characteristically enjoyable account of his discoveries in the Triassic deposits of Argentina. He first pointed out that early work on Triassic land vertebrates provided information about only the early and late faunas of the period. The Lower Triassic was still dominated by the mammal-like reptiles; these were almost absent from the Upper Triassic fauna, which was instead dominated by the early dinosaurs and by the pseudosuchians from which they had evolved. The great change between these two quite different faunas must have occurred in the Middle Triassic, but the land fauna of the intervening time was at first unknown.

Middle Triassic faunas were first described from Brazil and later from East Africa. These discoveries provided two surprises. First, the Middle Triassic fauna was not merely transitional between those of the Lower and Upper Triassic; it also contained abundant remains of a peculiar herbivorous group of reptiles, the rhynchosaurs, related to the living tuatara lizard *Sphenodon*. Second, there was a great deal of similarity between the faunas of this age from the two continents.

Although Triassic deposits were known in Argentina, hardly any vertebrate material had been collected before Romer took a party there in 1958. The deposits lie in the deserts to the east of the main range of the Andes. As Romer showed in some slides, these wild, desolate and almost waterless areas are therefore backed by snow-capped peaks up to 21,000 feet high. After some disappointments, the party eventually found, in the Ischigualasto Valley of north-western Argentina, one of the richest faunas of Triassic age known anywhere in the world. In about six weeks, the party collected more than 100 specimens. These showed that the fauna was of Middle Triassic type, containing the peculiar rhynchosaurs as well as the last mammal-like reptiles and early dinosaurs.

Thus at the age of 63, Romer had opened up a whole new area to vertebrate palaeontology, but only those who did not know him could have been surprised to learn that, six years later, he was again in Argentina, searching for even earlier Triassic deposits. He described last week how his party spent two unrewarding months tramping the Argentinian badlands, finding nothing but a few fossil minnows and reptilian footprints. Soon after Christmas 1964, however, luck turned. Even the liberal standards of the Ischigualasto discovery were surpassed by the new finds near the dry River Chañares: "the most fabulous collection we had ever seen, or ever hoped to see", Romer said. In two months, more than 200 reptilian skulls, together with a quantity of skeletal material, had been collected for shipment to the United States, as permitted under the agreement between the Museum of Comparative Zoology at Harvard and the Government of Argentina. Then, said Romer, the pendulum swung again, for the

governor of the province in which the fossils had been collected illegally impounded the whole collection, except for one box which the party was able to smuggle out of the province. It was not until nearly two years later that the rest of the collection finally arrived in Harvard.

One of the cynodont reptiles from Chañares is particularly interesting because its dentary bone has met the squamosal and started to take part in the articulation of the lower jaw, as it does in their mammalian descendants. Dr Romer believes that this fauna, like the Ischigualasto fauna, is of Middle Triassic age although somewhat older. Argentinian palaeontologists, stimulated by his explorations, are now actively collecting and finding even earlier Triassic faunas, one of which contains genera known also from South Africa. Romer's work has not only provided valuable new information, but has also led to a welcome new palaeontological contribution to the data on continental drift and on the old super-continent of Gondwanaland.

BLOOD

Clotting and the Animal Kingdom

from a Correspondent

AN insight into the clotting process in animals should provide many clues to an understanding of the normal haemostatic mechanism and its failure in man and thus to the aetiology of thrombosis. Those who attended the symposium on the haemostatic mechanism of man and animals at the Zoological Society, London, on December 4 and 5 must have found the papers fruitful and stimulating. In his introduction, Professor R. G. Macfarlane (University of Oxford) stressed the difficulties of communication within modern scientific disciplines, and it became apparent after the first few contributions that nowhere is this more true than in haemostasis.

In the event of injury, it is important to maintain the integrity of the organism, and without any obvious systematic development a highly complex and effective mechanism has evolved. Dr A. E. Needham (University of Oxford) explained that in primitive invertebrates this is achieved by simple muscular contraction, protein aggregation or gelation; in some classes, specialized cells appear in the haemolymph. The process has evolved, through arthropods with cellular and plasmatic mechanisms, to mammals in which complex circulatory systems have resulted in progression from cellular dependence to a highly complex state chiefly involving plasma factors. The smaller mammals have been extensively studied, and it became clear that it is difficult to relate comparative aspects because of difficulties in methodology. In man, the study of haemostasis has been facilitated by the availability of patients with specific congenital defects of coagulation. Drs K. W. E. Denson and R. P. Biggs (Churchill Hospital, Oxford) reported that many of these defects are known to be due to structurally defective proteins.

An enthusiastic discussion, stimulated by Professor Macfarlane and Professor G. V. R. Born (Royal College of Surgeons, London), who spoke about the physiology of platelet function, revealed large gaps in our knowledge. Attempts were made to compare