

January 13, 1886.—Prof. T. G. Bonney, D.Sc., LL.D., F.R.S.,  
President, in the Chair.

The following communication was read :—

“On some Fish-remains from the Tertiary Strata of New Zealand.” By James W. Davis, Esq., F.G.S.

A number of fossil fish-remains from Tertiary beds in New Zealand have been forwarded to the author by Captain F. W. Hutton, and were described in the present paper. The forms of which descriptions were given are two new species of *Lamna*, *Carcharodon angustidens*, Agassiz, and a new *Carcharodon*, one new species of *Notidanus*, one of *Myliobatis*, and one referred to *Sparnodus*. All the above are founded on teeth. A vertebra of *Lamna* and a fish-spine were also described, and the collection contained a specimen regarded by the author as a fragment of a Reptilian tooth.

#### MISCELLANEOUS.

*On the Question of the Origin of the European Races of Dogs.*

By Prof. J. N. WOLDRICH.

J-1437.  
I STAND now in the same position as formerly\* with regard to this question. It is, I think, just as impossible to derive our races of dogs from one or all of our wild European Canidæ (wolf, jackal, and fox) as it is to derive the European races of men from one or more of the still extant savage peoples, or to obtain a European civilized race by continued culture from a Bosjesman. Only a very careful detailed study of the fossil remains of Canidæ can lead us in this respect into the right road. I have therefore already, in my writings on Diluvial Canidæ, sharply separated the *forms* which occur, without any reference to the apparently scarcely solvable question whether they were species, races, or varieties. A fusion of allied fossil forms may be left to further study; this can only be effected when the detailed knowledge of fossil forms has become much more extensive.

According to my investigations, the following forms of domestic dogs have been made known from alluvial, prehistoric, and early historic times by the discovery of their remains :—*Canis familiaris Spalletti*, Strobel; *C. familiaris palustris*, Rütim.; *C. familiaris palustris ladogensis*, Anučin; *C. familiaris intermedius*, Wold.; *C. familiaris Mostranzewi*, Anučin; *C. familiaris optimæ matris*, Jeitteles (two forms); and *C. familiaris decumanus*, Nehring. Of

\* See the author's memoir “Ueber Caniden des Diluviums,” in Denkschr. k.-k. Akad. Wiss. in Wien, Band xxxix., and other papers.



Diluvial forms of *Canis* (Gray's true dogs) there are known:—*Canis hercynicus*, Wold.; *C. Mikii*, Wold.; *C. intermedius*, Wold.; and *C. ferus*, Bourgt. Figures and descriptions of these Diluvial dogs are contained in my publications.

I am now of opinion that *Canis familiaris Spalletti*, Strob., is to be regarded as the representative of the group of the living *spitz-dogs*, and that it may have originated from the Diluvial *Canis hercynicus*, Wold. *Canis familiaris palustris*, Rütim., is probably the representative of the existing *spaniels* and smaller sporting-dogs, as well as of a portion of the yard-dogs, and may be derivable from the Diluvial *Canis Mikii*. *Canis familiaris palustris*, or the peat-dog of the oldest pile-dwellings, was widely distributed over Europe as early as the Neolithic period; I have recognized it even in the Danish kitchen-middens; it appears to be one of the oldest of domestic dogs, as is evidenced by its wide distribution and its agreement (according to Studer) with the house-dog of the Papuas (*Canis hibernica*, Quoy et Gaimard). It would appear that the more powerful *Canis familiaris palustris ladogensis*, Anuč., also belongs to its series of forms. Now as domestic dogs similar to this dog of the stone age of Lake Ladoga are met with among the Lapps, Samojedes, Tschuktsches, and Tunguses, as also among the peoples of North America, the distribution of this form of dog would be remarkably wide. The peat-dog, however, had already varied considerably at the close of the stone age and during the bronze age, and this, it seems to me, less in consequence of select breeding than of intermixture; thus its smaller sharp-nosed forms in the later pile-dwellings may have already received blood of the spitz-dog and the larger ones blood of a larger dog, perhaps the widely-distributed *Canis familiaris intermedius*.

In *Canis familiaris intermedius*, Wold., we have the representative of our middle-sized true sheepdogs (not the large wolf-like ones), and its ancestor is the Diluvial *Canis intermedius*, Wold. This prehistoric dog I have also recognized in the Danish kitchen-middens: it was widely distributed as early as the bronze age. Whether *Canis familiaris Mostranzewi*, Anuč., is also to be referred to the form of *C. familiaris intermedius*, or to the larger of the forms distinguished by Jeitteles, or whether it represents an independent form, I cannot at present decide. Of *Canis familiaris optimæ matris*, Jeitt., two forms are distinguishable—one greyhound-like, the other that of a large powerful hunting-dog. In France, as well as with us, there occur in the Diluvium the remains of a dog, *Canis ferus*, Bourgt., of the size of an average wolf, which will probably have to be united with the above-mentioned powerful hound-like form. Finally, as regards the prehistoric *Canis familiaris decumanus*, Nehring, this greatly resembles our *mastiffs*, of which I am inclined, with great probability, to regard the Diluvial *Lupus Suessi*, Wold., as the ancestor.

Lastly, that our *greyhounds* have their ancestor in a Diluvial ancestor of the African *Simenia simensis*, Gray, seems to me to be quite certain; and so also for some of our long-eared small dogs the



Diluvial ancestor of the African fennec (*Fennecus*, Gray) may come under consideration.

That our existing wild Canidæ (wolf, jackal, and fox) may in the lapse of time have been employed in crossing with true dogs, and thus might have contributed to the formation of race-forms (*e. g.* perhaps the sheepdog and wolfdog), I will not at present dispute; but the question whether and how far this may be the case, as well as the question how far still living forms referred to the groups of the wolf or the fox (such as *Lupus pallipes*, Gray, and *Lupus japonicus*, Nehring, and other wild Canidæ of Asia and Africa) approach or correspond with the remains of our Diluvial true dogs, and, further, the question whether and how far the forms of *Cuon*, Gray, occurring with us in the Diluvium, and which, by the peculiar texture of their teeth approach rather to the true dogs than to the wolves, may have taken part in the formation of the races of our domestic dogs, will have to be shown by further detailed investigations.

This, however, appears to me to be certain, that the ancestors of our European races of domestic dogs no longer exist (in Europe). At the same time I regard it as very probable that the so-called *feral* dogs of Syria are not "feral" domestic dogs at all, but the remnant of a Diluvial true wild dog, to be brought into union with *Canis familiaris palustris* and *ladogensis*. Whether this is the case also with the "feral" dogs of Africa I cannot at present assert.—*Anzeiger k.-k. Akad. Wiss. Wien*, January 21, 1886, pp. 12-16.

*Pelagic Animals from Freshwater Basins in Alsace-Lorraine.*

By Dr. O. E. IMHOF.

I took the opportunity of my presence at the fifty-eighth meeting of German naturalists and physicians at Strasburg to make an excursion on 23rd September last for the investigation of the microscopic fauna of the so-called "Weiher" between Saarbarg and Dienze, in the north-west part of Alsace-Lorraine. There are here a number of larger and smaller accumulations of fresh water, which, with the exception of two, namely the Mittersheimer- and Gunderchingen-Weiher (both the property of the State), are periodically for some years laid dry and cultivated over almost their whole extent. The largest of them may be the Linden-Weiher, near Dienze, the bottom of which is at present under cultivation. Some of these reservoirs of water are of considerable extent; thus the above-mentioned Mittersheimer-Weiher measures about  $4\frac{1}{2}$  kilometres in length.

On the 23rd September, by means of the pelagic net, I collected material in three of these pools, namely the Mittersheimer-, Niederstein-, and Zemmingen-Weiher. In the last I had a boat at my command, while in the former two freshwater basins I attained my object by throwing out the net from the sluice, where in general the deepest part occurs.



Woldr

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Johann,

↑

. 1886. "On the question of the origin of the European races of dogs." *The Annals and magazine of natural history; zoology, botany, and geology* 17, 295–297. <https://doi.org/10.1080/00222938609460147>.

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