OSCAR A. JOHANNSEN, assistant professor of civil engineering at Cornell University and author of researches on the biology of water supply, has accepted the professorship of entomology in the University of Maine.

DR. J. E. KIRKWOOD, formerly an investigator with the Continental-Mexican Rubber Company in Mexico, has been appointed assistant professor of forestry and botany in the University of Montana.

CHAS. H. TAYLOR, a graduate student in geology at the University of Chicago, has been appointed assistant professor of geology in the University of Oklahoma.

PROFESSOR H. A. WILSON, F.R.S., of King's College, London, has accepted the appointment of professor of physics in McGill University.

DR. ARTHUR LAPWORTH has been appointed a senior lecturer in chemistry at the University of Manchester. He is the son of Dr. Lapworth, F.R.S., professor of geology at Birmingham, and is at present head of the chemical department of the Goldsmiths' Institute, New-cross.

DISCUSSION AND CORRESPONDENCE

MYLOSTOMID DENTAL PLATES

IN a recent contribution by Dr. L. Hussakof on "Relationships of American Arthrodires" (*Bull. Amer. Mus. Nat. Hist.*, 26, art. 20), a peculiar dental element is made known under the caption of *Dinognathus ferox*. The designation applies to a supposed new genus and species of Arthrodires, of doubtful family relations, and whose characters are imperfectly definable. The position of the plate in the mouth is held to be indeterminate, although remark is made that "its form is not suggestive of having been set in a titanichthid mandible."

Knowledge of this unique structure is the more welcome, since, as the present writer believes, it dispels the mystery of the missing upper dentition of *Mylostoma terrelli* Newb. That the peculiar plate in question belongs to the same sort of creature, if not indeed to the identical species as that established by Newberry upon the evidence of a solitary mandibular plate (now the property of the Museum of Comparative Zoology), seems practically certain. At all events it can be provisionally associated with the type of *M. terrelli* with the same confidence that actuated Newberry's theoretical correlation of upper and lower dental plates of *M. variabile*—an hypothesis afterwards confirmed beyond peradventure by Bashford Dean.

The mylostomid nature of the novel dental plate under discussion is unmistakable, one might even say self-evident, the moment it is perceived to be a compound instead of simple element, representing in its entirety the forwardly placed pair of palato-pterygoid dental plates common to Arthrodires and Ctenodipterines. Among the latter, *Heliodus lesleyi* furnishes an analogous instance of fusion of the corresponding parts.

The newly discovered dental plate is significant for yet another reason, namely, for enlightening us as to the extent to which the components of the upper dentition of Arthrodires are capable of fusion *inter se*. Certainly in *Dinomylostoma*, and presumably, also, in *Mylostoma* proper, there is a single pair of vomerine, and two distinct pairs of palato-pterygoid dental plates. In Dinichthyids, so far as known, the two last-named pairs on either side are fused into a single "maxillary" element or "shear-tooth." *Dinognathus* is peculiar in having the forward pair of palato-pterygoid tritors fused into a single plate, whose periphery accords fairly well with the antero-external contour of the mandible—that is, on the assumption that Newberry's so-called *M. terrelli* and the newly described *Dinognathus ferox* relate merely to different parts of the same dental apparatus. It is pertinent to observe further that a rounded eminence occurs in the median line anteriorly, as shown in Dr. Hussakof's figure, corresponding in size and position to surface elevations of the homologous plates in *M. variabile*. The manner in which these eminences interact with depressions in the functional surface of the lower dentition has been discussed elsewhere. As to the occurrence of vomerine teeth and a

posterior pair of palato-pterygoid dental plates in the new genus described by Dr. Hussakof we are still without information, but the presence of the latter, at least, may be predicated as a logical necessity.

Newberry's recognition of *M. terrelli* as a distinct species is justified by appreciable differences between the mandible upon which it was founded and those characterized by him as *M. variabile*. Generic differences between it and other Mylostomids are now indicated by the characters of its (supposed) upper dental pavement. Hence, in order to give effectiveness to the theoretical association of parts here proposed, it becomes necessary first of all to unite the two "species" of *ferox* and *terrelli;* and secondly, to substitute the latter specific title, on grounds of priority, as genotype of *Dinognathus*.

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A LAWYER ON THE NOMENCLATURE QUESTION

Discussions of the past year or two in scientific journals—more particularly in Science—move the undersigned to free his mind on the above subject. Trained first as a zoologist and later as a lawyer, he now follows law as his vocation and zoology as his avocation. This is a good combination of schoolings for the appreciation of some aspects of the nomenclature question.

In the first place, nomenclature as an art—and it is already an art and a very specialized one at that—is not science at all, but law pure and simple. It is the art of interpreting and applying to various states of natural fact the unnatural man-made rules which have grown up during the last century and a half, partly by unwritten custom, partly by precedents, and partly by conscious legislation, just exactly as other systems of law have grown up. Doubtless it is because the scientific men who handle this body of law have no legal training and try to handle it as if it were science (as some undoubtedly suppose it to be) that they make such a prodigious bungle of it. Their chief blunder is that they endeavor to carry on and administer and build up this system of law *without any courts!* Consequently every piece of litigation (conducted most uneconomically and unsystematically by loose correspondence and articles in scientific journals which ought to be reserved for better things) is indeterminate and each litigant remains of the same opinion still and acts accordingly. If merchants and business men were so stupid as to try to administer the complicated rules of their game for themselves, to the ruinous neglect of their real interests, without special training in the making and interpreting of rules, and *without tribunals for the settlement of their questions,* we should have an exact parallel to the situation which has arisen in zoology and botany.

Some may doubt my dictum that the field of nomenclature is a field of law, not science. Let me add to this dictum one to the effect that many, if not most, of the questions of nomenclature (like many questions of law) are of utterly insignificant importance so only that they be settled *one way or the other, quickly, definitely* and *permanently.* Then let me cite an instance—and a fair one too—illustrative of both dicta.

Picking up the April number of the *Proceedings of the Malacological Society of London,* I see that A. J. Jukes-Brown, a competent authority in the malacological world, differs widely and strenuously, though courteously, from our own Dr. Dall (a highly competent authority) as to the nomenclature of certain groups of the Veneridæ. In part his difference turns on different findings and interpretations of facts. These are scientific differences. The scientific methods of which each is master will enable the two men to agree—or if they can not reach the same conclusion then to agree to differ. Neither can, or should, after his final reexamination of the evidence, yield his honest opinion a jot to anybody or to any tribunal. But in part his difference turns on the following point. Dr. Paul Fischer, in his "Manuel de Conchyliologie" (etc.), did much rearranging and collating of generic and subgeneric groups. For each group he had the habit of naming one species with the prefix "*ex.*," standing, of course, for "example." Dr. Dall, perhaps not