in which the 'Burrowing Squirrel' of Lewis & Clark was made the type of a new genus and species, *Anisonyx brachiura*.* This animal had been named *Arctomys columbianus* by Ord two years previously;† and was afterward erroneously referred to the genus *Cynomys*—likewise proposed by Rafinesque for one of Lewis & Clark's animals. Several years ago I showed that the animal in question is a true ground squirrel or spermophile,‡ but refrained from reinstating Rafinesque's genus *Anisonyx* because it was then believed that a still earlier name would be found. A somewhat exhaustive search through the literature, however, has failed to bring to light anything earlier; hence it seems necessary to publicly reintroduce *Anisonyx* as the proper generic name for the group of mammals now commonly referred to *Spermophilus*.

THE EARLIEST AVAILABLE NAME FOR THE MOUNTAIN GOAT.

IT has been customary of late to refer the Mountain Goat to the genus *Mazama* of Rafinesque.§ But *Mazama* was based primarily on the *Temamazame* of Mexico, which Rafinesque called *M. tema*, and which has been since shown to be a deer.|| The next species mentioned by Rafinesque is our Mountain Goat, which he named *M. dorsata*. But under this species he makes the following unequivocal statement which seems to have been overlooked: "This species, with the following [*M. sericea*, which is really the same animal] and the *Mazama puda* [of Chili], will form a particular subgenus (or perhaps genus) which I shall call *Oreamnos*, distinguished by the horns slightly curved backwards or outwards, often rough or annulated, and long hair, besides living in mountains." (Am. Monthly Mag., II., 1817, 44). In view of these facts there seems to be no escape from the adoption of the name *Oreamnos* as the earliest available generic name for the Mountain Goat, which is the type and only known species of the genus, the '*M. puda*' being a South American deer. The full name for the species is *Oreamnos montanus* (Ord) 1815, and the type locality is the Cascade Range, near the Columbia River, in Oregon or Washington.

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* Am. Monthly Magazine, II., 1817, 45.

† Guthrie's Geography, 2dA m. Ed., II., 1815, 292 and 303–304.

‡ Mammals of Idaho, N. Am. Fauna, No. 5, July, 1891, 39–42.

§ Am. Monthly Mag., II., 1817, p. 44.

|| Biologia Centrali-Americana, Mammalia, 1880, p. 113.

THE NEED OF A CHANGE OF BASE IN THE STUDY OF NORTH AMERICAN ORTHOPTERA.

SOME twenty years ago one of the very acutest and most industrious of modern entomologists, the late Carl Stål, of Stockholm, began the publication of a Recensio Orthopterorum. In it and in kindred papers he had within five years laid the foundation of an entirely new system in nearly every family of Orthoptera, offering novel and taxonomically important but easily overlooked points of structure for subdivisions of a high order. A great deal of work has been done since then (the number of species has perhaps doubled), and it has been mainly upon the lines laid down by him, but in greater detail.

Most American students of Orthoptera, however, have been very poorly acquainted with these modern studies, and the result is that, with a distressing wealth of undetermined species, new forms have been described and referred to genera of ancient name, a procedure which in many cases has given little or a wrong impression of the real affinities of the insects in question, and it has now become impossible to correlate American and European work. Something, indeed much, has been done by European

entomologists, but their autoptic acquaintance with our fauna is relatively poor; and while there are ample materials here, there appears a remarkable paucity of students inclined to serious work in this direction. Lists we have in number, but in them almost invariably figure Acridium, Caloptenus, Oedipoda, Stenobothrus, Mantis, etc., genera which in their now restricted application do not or hardly exist in North America.

There has been some excuse for this, since the broad scope of Stål's work, embracing the Orthoptera of the globe, rendered work upon exclusively American material difficult to one without means of reference to extra-American insects, collections of which are uncommon in this country, though easily obtainable by any one with means. Still, it is strange that no one having access to the museums in our larger cities or universities has undertaken to apply the modern system of classification to one or another of the families or subfamilies of American Orthoptera. He would have earned merited applause from all students in this field.

One attempt, indeed, was made to collate what could be known of the Acrididæ, but it was before Stål began his work, and it may almost be classed as a hindrance. Now, however, the field is open, for Brunner von Wattenwyl, whose collection of Orthoptera is the richest in the world, published a year ago a *Révision du Système des Orthoptères*, through which, by means of the tables given by him of an exceedingly simple character (sometimes in practice one finds them too limited), one may quickly group his collection in a natural order, and by means of the literature to which reference is briefly made, determine the generic position or affinities of whatever he has before him. The way for a revision of any group is therefore clearer than ever before, and our entomologists will have none but themselves to blame if they do not hereafter better coördinate their work with that of the European writers.

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SCIENTIFIC LITERATURE.

An Elementary Treatise on Theoretical Mechanics.—Part I., Kinematics; Part II., Introduction to Dynamics; Part III., Kinetics. —By Alexander Ziwet, Assistant Professor of Mathematics in the University of Michigan.— 8vo.— Macmillan & Co., London and New York, 1893–94. Pp. viii+181, viii+183, viii+236.

Since Lagrange set the model for analytical mechanics in his *Mécanique Analytique*, a little more than a century ago, there has been no serious lack of good elementary works devoted to that science. Most conspicuous of the latter is Poisson's *Mécanique* (1811, 2d ed., 1833), which was undoubtedly more widely read and followed than any other work during the first half of this century. It is only recently, however, that the great advantage of the analytical over the geometrical method in mechanics has come to be generally recognized by authors and educators. The influence of Newton has long held English writers to the geometrical form of the *Principia*. To this, nevertheless, there are a few noteworthy exceptions, the most important of which in the present half century is probably Price, whose volumes on analytical mechanics (*Infinitesimal Calculus*, Vols. III. and IV., 1862) have done excellent service.

Along with the remarkable growth of science in general during the past thirty years a great impetus has been given to mechanics. This is traceable chiefly to two sources, namely: first, the development of the Faraday-Maxwell view of electricity and magnetism; and, second, the thought-inspiring qualities of the great work of Thomson and Tait on *Natural Philosophy*.