

It is evident that the structure of the sacrum at once shows the close affinity of this genus to *Agathaumas*. The description of the sacrum can be applied fully to the sacrum figured by Professor Marsh under the name of *Triceratops*. The description of the fore and hind limbs also agrees very much with that of *Triceratops*, and there is not the slightest doubt that *Monoclonius* belongs to the same family. *Monoclonius* and *Ceratops* are from the same locality, Cow Island, Montana; and the portions of the skull figured by Professor Cope (*American Naturalist*, August, 1889) leave no doubt whatever that *Monoclonius* is identical with *Ceratops*. The elements formerly considered by Professor Cope as episternum represent the parietals. I know and have examined the types of *Monoclonius* and *Ceratops*, and can state that the two forms are not generically distinct. In the April number of the *American Journal of Science* a restoration of *Triceratops* is given by Professor Marsh. I think there is no evidence that the animal had such a long tail as the restoration shows. The post-pubis, the presence of which I had predicted (*American Naturalist*, June, 1890), is not represented. In the February number of the *American Journal of Science* Professor Marsh makes the following remarks about the pubis: "One pubis recently discovered has a short, splint-like process, which may, perhaps, be a remnant of a post-pubic element, although it does not have the position of the post-pubic bone in other dinosaurs." Now, there cannot be the slightest doubt that this process is the same element as in the other *Iguanodontia*, and I do not see that it differs in position. The "splint-like process" is not complete behind, and I predict again that this process extended very much farther behind, just as in the allied *Iguanodontidae*.

One of the characters now given by Professor Marsh to the horned saurians consists in the presence of a pineal foramen. This is evidently a mistake. The foramen described as a pineal foramen has nothing whatever to do, even if it really exists in all the skulls, with the true pineal foramen. This foramen is absent in all *Iguanodontia*, and it certainly would not make its appearance again in such a highly specialized animal as *Agathaumas*. I have nothing to add in regard to the teeth. I repeat, that they have not two true roots (compare the *American Naturalist*, June, 1890). The lumbar of the *Agathaumidae* are not absent, as stated by Professor Marsh, but are simply co-ossified with the sacral vertebrae. The statement that the post-frontals meet in the middle line I take the liberty to doubt.

The *Agathaumidae* (this is the only name which can be given to this group) represents a highly specialized family of the *Iguanodontia* (*Orthopoda*), the nearest allies of which are exhibited by the *Iguanodontidae*.

The *Agathaumidae* contain two forms which are well defined (I neglect here the horned saurians *Crataemus* of the Gosau formation, Austria, of which only fragments are known),—*Agathaumas* Cope, 1872 (*Bison* Marsh, 1887; *Triceratops* Marsh, 1889; *Sterrhophus* Marsh, 1891), and *Monoclonius* Cope, 1876 (*Ceratops* Marsh, 1888). *Polyona* Cope, I think, is also a synonyme of *Agathaumas*.

This result is different from that reached by Professor Marsh, who states in the February number of the *American Journal of Science*, 1891, "The generic names *Agathaumas*, *Crataemus*, *Monoclonius*, and one or two others, have been given to fragmentary fossils which may belong to this group; but these remains, so far as made known, appear quite distinct from those here described" (*Ceratops*, *Triceratops*).

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Clark University, Worcester, Mass., April 2.

The Shrike.

A PLEASANT article, chiefly concerning the shrike, or butcher-bird,—one of John Burroughs's bright articles,—calls to my mind some questions concerning the food of the shrike. Burroughs says that the shrike kills lizards, toads, birds, etc., by striking them on the head, then eats the brains only, and hangs up the carcass. What for?

Professor A. Newton, in "Encyclopædia Britannica," says the shrike hangs up its prey, or impales it, for greater convenience in tearing the carcass to pieces in order to devour it. I have seen a

shrike's nest *in situ*. Around it hung a beetle, a mouse, a small bird, and a big bumble-bee. All were within reach of the bird as she sat on her eggs. A dart forward of her head brought her beak upon any one of these victims. For what were they hung up? For traps, I venture to suggest.

The shrike, no doubt, strikes its prey on the thin skull-bone. Let us say that instinct teaches that here is the spot most vulnerable for a beak no larger than that of the shrike. The exposed brain presents a soft eatable morsel, and the shrike eats it *en passant*. Then it hangs up its booty, and straightway the decaying carcass attracts insects, blue-flies notably, and thereon the shrike feasts. I believe that the shrike is chiefly insectivorous; and its habit of hanging up plunder, making a kind of larder all about its nest, is to call there plenty of large flies, which can be safely picked off as the bird sits on her eggs. True, the shrike hangs up carcasses far from its nest; but to these carcasses it can return frequently for the flies they have attracted. No doubt the instinct which suggests converting the vicinage of the nest to a shamble will prompt the bird to hang up whatever is killed by it, in the place nearest at hand.

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Fulton, Mo., April 7.

Iroquoian Etymologies.

In an article in *The American Anthropologist* (vol. i. No. 2) suggesting an Algonquian origin for the word "Iroquois," the writer had occasion to criticise a derivation given to this word by Mr. Horatio Hale, in his "Iroquois Book of Rites." This criticism is as follows:—

"Mr. Hale finds what he believes to be at least a possible origin in the indeterminate form of the Iroquois word *garokwa* ('pipe,' or 'string [error for "portion"] of tobacco'), *ierokwa* ('they who smoke,' briefly 'tobacco people'), the Iroquois being well known to have cultivated tobacco. With reference to this derivation, I am not aware that *garokwa* is used as a verb in any of the Iroquoian tongues. If not so used, it cannot, of course, have an indeterminate form, *ierokwa*; if this form existed, it would mean, not 'they who smoke,' but 'one smokes by which.'"

In the next issue of the quarterly named above, Mr. Hale tried, in "Indian Etymologies," to defend his erroneous derivation which had been called in question by the writer. Among other things equally remarkable, he says, "I have no desire to criticise it, but may be allowed to vindicate my own suggestion from the imputations of ignorance or carelessness, which his objections seem to imply. For this object it is not necessary to claim a profound knowledge of the Iroquois tongue, which is one of the most difficult of languages; but Mr. Hewitt, who has read my volume on the 'Iroquois Book of Rites,' might, perhaps, have reasonably given the author credit for a more careful study of the first principles of the language than he seems willing to suppose. With reference to my suggested derivation of the word from the verbal form *ierokwa* ('they who smoke,' reminding one of 'The Tobacco People,' which was a well-known designation of a Huron tribe), Mr. Hewitt remarks, 'I am not aware that *garokwa* is used as a verb in any of the Iroquoian tongues.' If he will refer to the volume just mentioned, he will find, on p. 116 (paragraph 2), the word in question used as a verb in this native composition. The form here employed is *denighroghkwaïen*."

If *denighroghkwaïen* were an instance of the stem of *garokwa* used as a verb, it would prove Mr. Hale's position and the justness of his remarks; but, unfortunately for Mr. Hale, it is not such an instance. This will be shown in the sequel.

Moreover, Mr. Hale's contention that a mere superficial knowledge of the tongue is sufficient preparation to enable one to analyze accurately its terms and sentences is inconsistent and self-contradictory: since, if it be true that the Iroquoian tongue is "one of the most difficult of languages," then, before putting forth any etymologic analysis of its vocables and sentences, it is not only necessary, but imperative, to have a knowledge of its grammatic and morphologic processes sufficiently "profound" to enable the student attempting an etymology to ascertain the several parts of speech, their flexions, and their positions in sentence-words, because such a knowledge will prevent him from mistaking the