lectures, contributions from the laboratories of the University and of the School of Mines, Bulletins of the Agricultural College, etc.

The latest of these omitted reports was found by me since the publication of the Missouri bibliography, in the House journal of the adjourned session of the twenty-sixth General Assembly, 1871-72, pp. 226-290, and I think it was not published except in that journal. Its title is "Report of Progress of the State Geological Survey, from August 30, 1870, to March 13, 1872. By J. G. Norwood, State Geologist, pro tem., State University, Columbia, March 13, 1872."

CHARACTER IN ANIMALS.

BY W. C. BARRETT, M.D., D.D.S., BUFFALO, N. Y.

MAN too often looks upon the lower orders as possessed of nothing but selfish instincts and impulses, and as being moved by nothing but animal appetites. He becomes a tyrant over them, and never for a moment dreams that they can comprehend his meanness and injustice. A little more of observation would remove this impression. Who that has been in close contact with any class of animals but can call to mind instances of the exercise of gratitude, real benevolence and magnanimity, that would do honor to the noblest human beings?

This is not confined to domestic animals, nor can the exhibition of special traits be attributed to their association with man. It is a truth which no observer will deny, that some are quite incapable of affectionate impulses. They seem to have sufficient intelligence, but like some men they are utterly and entirely selfish, while others are even morose and vindictive. There is as distinct and characteristic an individuality in their natures as in that of human creatures. It is an interesting exercise to study these personal peculiarities even in wild animals, and to detect the human traits which distinguish each. Birds that seek the companionship of man exhibit a wide variation in individuality. It is not difficult to obtain the confidence and trusting faith of some robins, for instance, while others are ever suspicious and distrustful.

I was once possessed of a common red squirrel, that was caught when but a few days old, and which had the most charming personal characteristics imaginable. I never saw in any human being a stronger and more marked individuality than this animal possessed. It was as playful as a young kitten, and delighted in the attentions of anyone of whom it was fond. It was as affectionate and as demonstrative as ever I saw a young child. It had withal a merry, playful mischievousness, that while it was at times vexatious, made it seem almost human. It was allowed to run about the rooms at will, and it found the most constant delight in entangling a piece of knitting or other work, and, when detected, in attaining some inaccessible height, then indulging in a chuckling kind of chatter. The chess table could never be set out with the animal at liberty, but that when the players became absorbed in the game and had forgotten all else, Jennie would suddenly alight upon the table, scattering rooks and pawns in every direction, and instantly disappearing up a curtain or into some nook in the book-cases. This would be repeated as often as the players forgot their surroundings, until it became necessary to catch her and shut her up in her cage. One could not lie down upon a couch, with a newspaper which he was reading held aloft over the head, but that like a lightning flash Jennie would light upon the paper or book, and instantly scramble away to some safe place, where she would absolutely chuckle at the success of the scheme. She never gnawed the furniture but once, for she never forgot the punishment which this brought.

She was subject to likes and dislikes, and every visitor who entered the room was carefully scrutinized. If it was a lady who was looked upon with favor, her hair was pretty sure to be pulled down by the demonstrations of affection, and out of a seeming pure love for good-natured mischief. If, on the other hand, the visitor was looked upon with distrust, he could never get near the animal. It loved to fondle those who were its favorites, and exhibited the utmost affection for them. Indeed, its attentions sometimes became too intrusive for comfort.

One unlucky day an accident deprived poor Jennie of her life, and I obtained another, caught at quite as early an age, and always treated with the same kindness and care. I had expected another such charming pet, but there was no more similarity in disposition than there might be between two utterly diverse children. The second animal was morose, sullen, vindictive, in every way disagreeable. The first one would never under any circumstances attempt to bite, while the second was at least always threatening it, and forever scolding and chattering, until at last I gladly gave it freedom in the woods and obtained a successor.

This one was unlike either of the others. It was not playful or affectionate, nor was it perverse and churlish. It was a complete exemplification of the miser, and its whole character was absorbed in its acquisitiveness. It was ever hunting for nuts and other things which struck its fancy, usually articles of food, which it carried away to a secret place in a closet. Occasionally these were taken out by some member of the family and placed in another room, for the purpose of watching the seeming exultation with which the squirrel made their discovery, and the enjoyment it appeared to take in carrying them away and again hiding them. It would run back and forth with such extreme assiduity that it would tire itself out and drop panting upon the floor, only after a few moments' rest to recommence the task. If the newly-found treasure were suddenly removed during its absence, there would seem to be the most poignant disappointment. The animal would for a time search anxiously for the vanished wealth, and then in succession visit the members of the family who were present, and seem to beseech its return, as if knowing that we were responsible for its loss.

There was never a moment during the day which was not spent in searching for something to add to its hidden possessions, or in arranging and rearranging its store. The animal, like some men, was so utterly absorbed in its avariciousness, that it had no time to devote to anything else. All affection was lost in its sordid nature. It had no special dislike for or fear of human beings, yet it sought solitude, apparently to enjoy the contemplation of its accumulations. It was unsocial, simply because of its covetousness. No human mind ever exhibited a meaner avariciousness, or a more parsimonious stinginess. It would suffer for lack of food, rather than take one nut from its great possessions. Its most salient characteristics were so disagreeable to witness that I finally gave the animal away, and after several other attempts gave up in despair that attempt to find another such cheerful, engaging, affectionate, trusting pet as the first one, being fully convinced that such characteristics are as rare among squirrels as they are among men and women.

CURRENT NOTES ON ANTHROPOLOGY. — XXIX.

[*Edited by D. G. Brinton, M.D., LL.D., D.Sc.*]

Modifying Agents of Skull-Form.

IT looks now as if Broca, however eminent in many branches of anthropology, was no wiser as a prophet than others of that genus when he ventured this prediction: "The day will come when the characteristics of all the races and their subdivisions will be so well known, that the study of a series of skulls will be sufficient to determine their origin."

It is in pursuit of the realization of this dream that craniologists have labored ever since, with the result that they are farther from the goal than ever. Now, the wiser among them are turning their attention rather to the history of the development of the skull and its parts, both in the individual and, comparatively, in the realm of animal life, and not endeavoring to use it as a standard for the classification of races and peoples. It is found that in certain instances the shape of the same skull varies materially with the age of the individual; that the tendency to reversion to one or the other type in the parents is by no means equal in all cases; that there are marked correlations with greater strength, viability, and sexual life, which give one or the other form an advantage in a given *milieu* above its associate; that the prevailing type of a geographical province seems to exert an influence

without direct intermixture of blood; that social planes, which mean different modes of life and nourriture, exert an influence; and so on. This is the newer science of craniology, more complex, indeed, but far more promising than the old study of dry bones alone.

Ethnic Ideals of Physical Beauty.

The *vis superba formæ*, the "proud strength of beauty," has never yet been sufficiently acknowledged as a formative principle in the evolution of racial and national types. Through conscious cultivation and sexual selection every individual strives more or less to possess and propagate those traits which the national imagination conceives as the comeliest. In a recent thesis, Dr. Loubier tells us from a wide reading of the French poets of the twelfth and thirteenth centuries what they portray as the ideal of manly beauty. It is this: tall, broad-shouldered, deep chest, slender figure, foot arched, skin white, hair blonde, quick eyes, high color, red lips. Evidently this is the High German type rather than that of the modern French; but the poets drew their heroes only from the nobles, and not from the common herd.

Some years ago, in an article on "The Cradle of the Semites," I had occasion to study the ideals of male and female beauty shadowed forth in the erotic composition known as the "Song of of Songs," or the "Song of Solomon," in the Old Testament. It dates from about 250 B.C. There the male is portrayed as "white and ruddy," his hair black and curly, his eyes gray ("like doves washed with milk"), his stature tall. He describes his bride as "fair all over, without a spot," slender, "like a palm tree" (not fat, as modern Oriental beauties), her hair "as a flock of goats," that is, wavy and light-brown, probably, her lips red, "like a thread of scarlet." The interesting feature in both these descriptions is that they point much more to the blonde than to the brunette type as that which hovered before the imagination of the sons and daughters of Israel as the realization of their amorous dreams.

The Easternmost Wave of the Early Aryan Migrations.

The Khmers of Cambodia have long been regarded as an isolated people of mixed blood and uncertain affinities. In a meritorious work published in Germany this year, Schurtz's "Kathecismus der Völkerkunde," the author refers to them as the probable aboriginal inhabitants of Cambodia. On the other hand, in the Mémoires of the Society of Anthropology of Paris, Dr. Maurel of the French Marine has a very able article, based on original observation, much of it anthropometric, going to show that the ancestors of these Khmers were the leaders of the easternmost wave of migration of the Aryan or Indo-European stock.

That they came from Hindostan and brought with them the Aryan culture of that country is proved by the stately ruins of their temples around Ang-kok, whose walls are decorated with bas-reliefs of scenes from the Ramayana. Their arrival was probably about the third or fourth century of the Christian era, and their route apparently was from the delta of the Ganges across lower Birmah and Siam. It is likely that even at this time most of their followers were non-Aryan and the leaders rarely of pure blood. In later generations they received a large infusion of Mongolian admixture from the tribes they found in Cambodia, who belonged to that race.

These conclusions are borne out by a close anthropologic study of the existing population and of the history and archæology of the country. If correct, they show that the mighty Aryan stock, wandering from its pristine seat in western Europe, reached in its eastern wanderings almost to the shores of the Pacific, on the China Sea.

The Evolution of the Idea of God.

Last year a book was published in both French and English by Professor G. D'Alviella, under the title, "The Idea of God as Illustrated by Anthropology and History," and it received a careful handling by the distinguished Professor Reville in the Proceedings of the Musée Guimet. From these two excellent sources we may take the last word as to the genesis of the notion of Deity, as understood by scientific minds.

It arises first from the association of the idea of personal life with that of motion; for instance, the swaying of the tree to the primitive man is as certain a proof of personal life as the flying of a bird. By extension of this, and later through dreams, memories of the dead, and casual associations of motionless objects with motion (as a rock in the midst of a rapid), arose spiritism or animism, to which these writers apply the general name "polydemonism." In this stage there is no Pantheon, no hierarchy of the gods, no idealized generalizations of divine powers.

This appears in the next stage, which is "polytheism," in which the mind of man seeks to coördinate the visible powers of nature, and to explain one by the other, thus subsuming a group under one abstraction, which becomes to him a personified idealized force. This is the epoch of mythology, which is at once an imaginary history and a tentative philosophy of the unseen agencies in nature.

The ultimate stage, monotheism, has various origins, depending on the ethnic psychology of the people among whom it arises. It may be an exaltation of the national god through national pride, so that he shall be "God of Gods and Lord of Lords," as seems to have been the case with the Israelites; or it may arise from concentrated devotion to one divinity to the mental exclusion of others, as in the so-called "henotheism" of ancient Egypt; or, again, in nations of uncommon speculative insight, it may be a purely logical deduction, as among the ancient Greeks. Most of the so-called monotheisms are in reality only "monolatries;" that is, there is worship of but one god, though many divine powers are recognized as existing.

The important point is urged, especially by M. Reville, that this sequence of development is not historical; it is not even ethnic; but strictly anthropologic; that is, the whole of the sequence exists contemporaneously and in the same locality with its highest member. Alongside of the pure speculations of Plato were the puerilities of paganism; and in modern Christian communities there are far more polydemonists and polytheists than monotheists, in the scientific sense of that term.

Both writers reach the opinion that the religious sentiment is not a passing phase of human mental evolution, but a permanent trait; and that, though all existing cults and creeds may pass away, it will only be to give place to nobler ideals of humanity and loftier conceptions of divinity.

NOTES AND NEWS.

A SERIES of international congresses, under the auspices of the World's Congress Auxiliary, and the authority of the Government of the United States, will be held in Chicago during the progress of the World's Columbian Exposition. The Congress of Anthropology will begin on Monday, Aug. 28, and will continue until Saturday evening, Sept. 2, 1893. It is requested that the title and abstract of any paper to be offered to the Congress be forwarded as early as possible to the secretary of the Local Committee, with a statement of the time required for its reading, in order that the Congress, at its organization, may have the material for the arrangement of the programme for the week. The committees of the International Anthropological Congress are: Local Committee of Arrangements, F. W. Putnam, chairman, C. Staniland Wake, secretary, Edward E. Ayer, James W. Ellsworth, H. W. Beckwith, and Frederick Starr; Executive Committee, Daniel G. Brinton, president; Franz Boas, secretary; W. H. Holmes, representative of the American Association for the Advancement of Science; W. W. Newell, representative of American Folk Lore Society; Otis T. Mason, representative of Anthropological Society of Washington; Alice C. Fletcher, representative of the Women's Anthropological Society of America; Louis A. LaGarde, representative of United States Army Medical Museum; and the presidents and secretaries of the Sections of the Congress. Address all communications to Professor C. Staniland Wake, Local Secretary, Department of Ethnology, World's Columbian Exposition, Chicago.