

it shall be to take such steps as they may deem expedient to recommend to the Government the scientific exploration of Africa.

Committee, Dr. Ruschenberger, Dr. Leidy, Mr. Lea, Prof. Carson and Dr. Hallowell.

January 31st.

Vice-President BRIDGES in the Chair.

The Committees to which were referred the following papers, severally reported in favor of their publication in the Proceedings :

*On a new Entomostracan, of the family LIMNADIDÆ, inhabiting the Western waters.*

By CHARLES GIRARD.

LIMNADELLA, n. g.

*Gen. Char.*—Eye one. Antennæ subequal, provided upon their inferior side with long and plumose setæ, whilst on the upper side there are short, slender and simple spines. Two elongated tape-shaped jaws. Feet in twenty-four pairs, provided upon their extremities and sides with slender and plumose setæ, or hairs. A series of spiny processes along the posterior half of the dorsal line. Post abdominal plate very large. Nutritive system phlebenteric.

*Observations.*—This genus differs from *Limnadia* in being provided with one eye only, instead of two. Also by its antennæ, the two pairs of which are similar in structure, whilst in *Limnadia* one pair is smaller than the other. The post abdominal plate and number of feet will afford other distinguishing characters between *Limnadella* and *Limnadia*. From *Cyzicus* or *Estheria* it differs, first, by the structure of the shell, which in *Estheria* resembles that of an *Arca*, whilst, in *Limnadella*, it is altogether Cyproid in its general aspect. There is a marked difference between these two types in the structure of the antennæ, the joints of which are provided on their upper part with numerous spines in *Limnadella*, whilst in *Cyzicus* there is but one single spine at the anterior edge. The structure of the feet is likewise dissimilar, being furnished with plumose setæ in *Limnadella*.

LIMNADELLA KITEI, n. sp.

*Spec. Char.*—Shell: elongated, subelliptical, thickest anteriorly; twice as long as deep; anterior, inferior, and posterior margins regularly continuous; upper outline somewhat irregular on account of the beaks being rather prominent. Valves uniformly convex. Greatest depth one eighth of an inch, greatest length one quarter of an inch. Specimens may occasionally attain to a larger size. Color, deep or light brown, mottled with black. Animal: antennæ composed each of twelve or thirteen subequal joints. Twenty-four pairs of feet, the six posterior ones diminishing gradually away so as to render the last three rudimentary. The last of all is inserted upon the last caudal segment but one. There is a broad sub-triangular plate, terminated by two pairs of very large spines, curved upwards; the inferior pair being longer and slenderer than the upper one. The concave margin of that plate is furnished with a series of quite small spines. On the uppermost part of the post-abdominal plate is inserted a pair of very delicate sword shaped appendages, very difficult to be observed even with a good microscope. Along the posterior half of the back there exists a series of sixteen processes, provided upon their upper and posterior sides with about five or six minute curved spines, the tip of which is bent backwards. The anterior two of these processes are but rudimentary; the most developed occupy the middle of the series; the posterior ones again diminish gradually as they approximate the post-abdominal plate.

Specimens collected at Cincinnati were sent to the Smithsonian Institution by Thomas Kite, of that city.

*On the Ancient Alluvium of the Ohio River and its Tributaries.*

By ALFRED T. KING, M. D., of Greensburgh, Pa.

The Ohio River, and all its tributaries which I have examined, are bounded by an ancient alluvial deposit, rising from one to two hundred feet above the present beds of those streams, and extending from half a mile to nearly two miles in width.

In the brief description which I design to give of these deposits I shall commence with that extensive and remarkable one at the mouth of the Beaver River.

This is a beautiful and romantic stream, rising in the northern part of Beaver County, Pennsylvania. It runs nearly south, and empties into the Ohio river about thirty miles below Pittsburgh. At its mouth are two small towns, Rochester on the east and Bridgewater on the west. The town of Beaver, which is the seat of justice of Beaver county, is situated on the hill immediately above and west of Bridgewater, on an alluvial plain, two miles and a half in length, one mile, or nearly so, in width, and one hundred and thirty feet above the bed of the Ohio, stretching along the northern shore of that river. Although wells have been sunken, in different parts of the town, 128 or 130 feet, which would be about on a level with the bed of the Ohio, still no one has penetrated through this deposit. The strong probability is, therefore, that it extends many feet beneath the present bed of the river. On the opposite side of Beaver river this deposit stretches along the Ohio, about three quarters of a mile. At both extremities it is apparently transferred to the opposite side of the river, in consequence of the present curving of the stream, which causes the water to impinge against the base of those lofty hills which everywhere skirt the shores of this picturesque river. Seldom does the Ohio, or any of its numerous and mighty tributaries, flow through the centre of this ancient alluvium, for this deposit is seen every now and then on opposite shores.

On the eastern side of Beaver river this deposit is 20 or 30 feet higher than it is at the highest point on Beaver plain, which would make it there about 150 or 160 feet, above the bed of the Ohio. At the most eastern extremity the hills are composed of fine sand and loam, containing fluviatile and terrestrial shells of the genera *Anodonta*, *Unio*, *Planorbis*, *Paludina*, *Limnea* and *Helix*. Nearly the whole of the residue of this deposit at Rochester, Bridgewater and Beaver, is composed of nodules of argillaceous oxide of iron, and of rounded, polished river pebbles, from the size of gravel to the size of a man's head and upwards.

At the town of Rochester, the Pennsylvania and Ohio Railroad Company has made an extensive cut of about eighty feet through this mass of iron nodules and river pebbles. Here it exhibits symptoms of stratification. Commencing at the summit, there is first a thin seam, which composes the surface soil, of sandy loam, then loose pebbles, below which there is a seam of eight or ten feet of conglomerated pebbles cemented together with an oxide of iron. So firmly bound together are these pebbles, that the workmen, when making the cut, were obliged to blast them, and I am told that they encountered much more difficulty than they ordinarily do in more solid, compact rock. Below this is a seam of ignitable bituminous coal, about one inch and a half in thickness, extending entirely through the cut, and always preserving the same relative position. Below this coal were loose pebbles again, and so on, alternately, from the summit to the base.

Doubtless this tendency to stratification in alluvial, as well as in marine deposits, may be accounted for that streams at different periods transport different materials, but the continuous seams, and vast masses of hydrate of alumina, frequently seen in alluvial bluffs, particularly in those of the Mississippi river, and the pure crystals often seen imbedded in solid sedimentary rocks, clearly indicate the existence of chemical affinity between some of the particles of sediment, in connection with mere mechanical deposition.

Beaver river is a small stream, not larger than the Mohawk, but its scenery is exceedingly beautiful. Its calm and placid bosom reflects vividly like a

mirror the tall mountain cliffs, and the magnificently variegated scenery of the autumnal landscape. The deep gorges and dark precipitous ravines which cut transversely the lofty hills which rise like mountains on each side, and the broad alluvial plains which bound its shores, lined for miles with beautiful towns and villas, where the sound of cheerfulness and the hum of industry are everywhere heard, render the scenery exceeding interesting and picturesque.

From the mouth of this river to the town of New Brighton, a distance of about three miles, the alluvium is composed principally of pebbles, resembling those already described. Here it is about one hundred and fifty feet in depth, at the highest point, and about three quarters of a mile wide. From this point to a distance of from ten to fifteen miles above, this deposit is strewed over with immense masses of transported angular rocks, derived from the neighboring hills. These rocks are of all sizes, and, in places, very numerous, strewed about in every direction, and piled upon each other in the most irregular manner. There are several enormous piles of these quartzose rocks, or coal grit, about eight or ten miles from Rochester, lying upon the brow of a hill, which overlooks the river, and more than two hundred feet above its present bed. Some of these masses will weigh thousands of tons.

There is one which is probably *in situ*, which will measure twenty feet in height, and over one hundred feet in circumference, much shattered below, where it is grooved, rounded, and smoothed by the long continued action of running water. This rock presents a singular aspect to the observer who attempts to account for its present form, and its relative position with the river below. It is surrounded by huge but smaller masses of the same character, all exhibiting the same wearing and polishing action of running water, and piled upon each other in the wildest confusion.

I descended with Dr. Barker, of Beaver, who kindly accompanied me, this precipitous hill, along a narrow and winding path to the river below. All the way we passed over and around similar piles of rocks, and for miles above this point found a similar condition of things to exist. Most of these rocks are distinctly traceable to their parent hills, still higher up the stream.

The enormous size of some of these transported rocks, and the unequivocal evidence of the wearing action of running water upon them, indicate that they were carried by a long continued, turbulent and impetuous stream, which had been, previous to this exhibition of its maddening fury, in a comparatively quiet and placid condition, during which time the subjacent alluvial sediment, before described, was deposited. It may be proper to mention here, that in connection with these angular masses of quartzose grit, I found, not unfrequently, syenitic, granitic, porphyritic, greenstone boulders, &c., &c., which were exceedingly hard, rounded and polished, similar to the more common quartzose pebbles. The largest which I saw connected with the angular rocks would not weigh more than a few hundred pounds. But about three hundred feet above the head of little Beaver creek, a tributary of the Ohio river, and about twelve miles from the locality I am now describing, there are boulders of granite and other primary rocks lying upon the summit of a hill, which will measure thirty feet in circumference.

Indeed the hills, which here contain the enormous canal coal vein of from fourteen to eighteen feet in thickness, are strewed over with boulders of primary rocks, and the diluvial scratches and groovings are visible in places. These hills are, in some places, 300 feet high.

At different points along Beaver river, and at heights of more than a hundred feet above its present bed, I observed convincing indications of the grooving, smoothing and polishing action of running water, on the solid sandstones of the adjacent hills. These workings were unquestionably produced by the river when it flowed over this alluvial plain.

The same kind of markings I observed in the hills which skirt the shores of the Ohio. About fifteen miles below Pittsburgh, at a place called the Narrows, I observed, at the height of more than a hundred feet above the river, the solid sandstones polished and grooved, as if channelled by the moulding instrument of a joiner, and even pot holes are worn into their sides.

Nearly the entire cities of Pittsburgh, Allegheny and Cincinnati are built upon this remarkable deposit.

From Pittsburgh to Wilkesburg, seven miles east, it is seen stretched along the northern shore of the Monongahela river, and nearly two miles in width. To this remarkable locality I will now briefly direct attention.

Passing from Greensburg to Pittsburgh, along the turnpike, it will be observed that the last anticlinal roll of the Allegheny chain of mountains is at Grapeville, four miles west, and the last synclinal trough, which is but imperfectly formed, is about three miles further west. From this point the beautiful undulations which are so characteristic of the Allegheny chain, die away, and the rocks assume nearly a horizontal position. Their horizontality, however, is only apparent, for they really rise, at an almost inappreciable angle, westward. From this point to within seven miles of Pittsburgh the general geological and topographical structure of the country remains nearly the same.

At the summit of the hill, which overlooks the town of Wilkesburg, standing upon the limestone which is super-imposed upon the great Pittsburgh seam of coal, the observer beholds, more than a hundred feet beneath him, a beautiful and extensive alluvial plain, bounded on the north by hills, which separate it from the Allegheny river valley, and which contain the coal and limestone to which allusion has just been made, and on the South by the Monongahela river.

The whole of this great seam of coal and the incumbent limestone, to the depth of three hundred feet, have been swept away by a process of denudation, and their places partially supplied by an alluvial deposit over one hundred feet in thickness, and about the same height over the present bed of the Monongahela river.

As the Pennsylvania Railroad passes over this deposit I shall avail myself of the measurements which are given in one of the last annual reports of the Company.

The elevation of the Ohio river at Pittsburgh, above tide, is given at 700 feet. The elevation above tide at Wilkesburg is 922. There would, therefore, be a difference of tidal elevation between Pittsburgh and Wilkesburg of 222 feet. After subtracting 22 feet for the fall of the river between these two points, we would have 200 feet for the depth of the deposit.

If we assume that the shale and limestone upon which this vast deposit reposes, and which will be presently described, are from 200 to 300 feet beneath the Pittsburgh seam of coal, we will be enabled to form some idea of the enormous denuding process, by which this river excavated its channel, and afterwards deposited upon its ancient bed, in some places, over two hundred feet of sedimentary matter. This is, of course, only an approximative estimate; but from all the data which I have been enabled to procure, the average depth may be safely assumed at from one hundred to two hundred feet.

In consequence of the great depth of this deposit at Wilkesburg, I, at one time, conjectured that the Allegheny and Monongahela rivers met, at some antecedent period, and formed the Ohio, either at this point or at East Liberty, which are from five to seven miles East of their present junction. To satisfy myself on this curious point, I crossed the plain at Wilkesburg, three quarters of a mile, to the base of those lofty hills which separate the two great alluvial valleys, and found that the whole region was composed of river pebbles, sand and loam, with which were mingled fluvial and terrestrial shells.

Near the Frankstown road, which is nearly two miles in a straight line from the Monongahela river, I saw some men excavating a well. They had gone down to the depth of twenty or thirty feet, and had passed through nothing but pure river sand and pebbles, meeting occasionally only with an *Anodonta* or a *Union*.

Near this point I crossed the dividing hills, and descended along a narrow path to the road which winds along the bank of the Allegheny river. Here I found this ancient deposit presenting nearly the same appearances, and of about equal magnitude to the one on the Monongahela side. In the neighborhood of Laurenceville it is of great breadth, and of not less than two hundred feet in thickness.

The hills which separate these two ancient alluvial valleys are a continuous chain, and of sufficient altitude to constitute an effectual barrier to the mingling of the waters of these two rivers, at any point nearer than their present confluence at the city of Pittsburgh. I observed at Rochester, New Brighton, and at different points along the Monongahela and Allegheny rivers, that this deposit reposes on a dark colored shale, sometimes passing into more compact slate. As I was descending a hill on the Frankstown road, near East Liberty, I discovered an old acquaintance, a thin stratum of calcareous rock, on which the shale reposes, and which—in contradistinction to other limestones, belonging to the coal series—I have denominated the *Atrypa*-limestone.

This is a somewhat peculiar rock, characterised by containing a vast number of small bivalve shells, belonging to the genus *Atrypa*, etc. When long exposed to the atmosphere, its external surface readily disintegrates, and presents a ragged and shaly appearance, the surface being covered with small *Atrypæ* and projecting joints of *Encrinites*.

In some localities I have found in this rock the genera *Terebratula*, *Trilobites*, *Pleurotomaria*, *Productus*, *Spirifer*, *Bellerophon*, *Euomphalus*, *Ammonite* and *Orthoceras*. But the joints of *Encrinites* and the small *Atrypa* are the characteristic fossils, and distinguish it from all other limestones belonging to the carboniferous series. This limestone, in Westmoreland county, is seldom found more than two or three feet in thickness. But near the Ohio line I found it over ten feet, it being there a very compact and durable rock, well adapted for agricultural and other purposes. It is exposed at numerous points in Western Pennsylvania, and uniformly presents similar lithological and paleontological characters.

I mentioned, at the commencement of this paper, that this ancient alluvium was traceable everywhere along the Ohio river and its tributaries which I have examined, and doubtless along those which I have not so closely surveyed. Those tributaries to which my attention has been more particularly directed, are the Beaver, Allegheny, Monongahela, Youghiogeny, Kiskeminitas, Loyalhanna and Conemaugh rivers, etc., etc. But in the brief and necessarily imperfect delineation of these remarkable deposits, which I have attempted to give, I have confined myself to a few localities only, leaving a more extended and minute description for some future period.

It is not at all improbable that those high bluffs which bound the vast alluvial valley of the Mississippi river (which is from thirty to fifty miles in width), were deposited at the same period. Also the alluvial terraces on which the city of Cincinnati is built, the highest of which is 120 feet above the level of the Ohio river; and doubtless the natural terraces and ridges of Lake Erie and Ontario, which were so graphically delineated by Mr. Charles Whittlesey, of Cleveland, in the July No., 1850, of the American Journal of Science.

For, in all these localities, fossil teeth and other bones of the mammoth and mastodon have been found imbedded in this deposit. These animals, which were once the lords of the creation, the primates of this lower world, perished and became extinct in that last grand revolution, during which I presume these ancient sedimentary deposits were slowly and gradually elevated to their present position, and which immediately preceded the advent of man.

From the whole of this investigation my mind has been convinced that the relative position of the rivers and this ancient alluvium through which they now pass, or along whose borders their waters deeply flow, has changed since the period of deposition. But when, and in what manner, or by what cause, are questions not so readily answered as proposed.

The hypothesis of local oscillations, first proposed many years ago by Sir Charles Lyell, to account for the deposition of the Rhenish loess, will, with slight modifications, I believe, clearly explain all the phenomena connected with this post tertiary formation.

Indeed, from the numerous facts upon which this hypothesis is based, it may be regarded as an exceedingly plausible theory, if not a legitimate induction.

It has long been ascertained that various parts of the earth's surface are now, and perhaps ever have been, undergoing slow and gradual oscillatory movements.

Parts of Sweden, Norway, and the shores of the gulf of Bothnia, have been long gradually rising. Also extensive regions of South America have been undergoing a slow but gradual upheaval, during a period of many centuries. On the other hand, the gradual sinking of the coast of Greenland, for the space of more than six hundred miles, during the last 400 years, has been more incontrovertibly established by actual markings and critical examinations made by the most astute minds.

Large portions of the earth's surface have been suddenly upheaved, whilst others have as suddenly subsided.

The whole coast of Chili was suddenly elevated several feet by the earthquake of 1822, producing terrible commotion in the sea, and sending vast waves over the ocean, which doubtless transported huge masses of rocks many miles from the shore.

In 1811, an earthquake sank the town of New Madrid, on the Mississippi river, several feet beneath the waters, the vibrations of which continued three months.

Many other facts of an analogous character might be adduced, but these are sufficient to show that various parts of the crust of the earth are now undergoing oscillations, and that it is not at all improbable that the hydrographical basin of the Ohio may have undergone, at some remote period, similar movements.

First we may suppose that there was a gradual subsidence during a period, perhaps, of many centuries, of the whole hydrographical basins of the Ohio and Mississippi rivers, and even extending beyond the limits of their tributary streams. This depression of the land would necessarily lessen the fall of the waters into the Gulf of Mexico, and increase the alluvial deposit. After a certain indefinite period we can readily suppose that this process of subsidence was reversed, and the whole as gradually upheaved, until the rocks were brought to their present altitude, when the oscillation ceased.

During this slow upward movement the waters would necessarily cut their channels through the alluvial deposit, which had been thrown down during the process of subsidence.

At the commencement of this upward movement we may suppose a sudden upheaval to have occurred in Beaver county, somewhat analogous to that on the coast of Chili, in 1822, which would produce such commotion and recoil of the waters in Beaver river as to cause them to impinge, with terrific force, against the projecting rocks of the adjacent hills, rive them asunder, and pile them as they are now found, over its ancient alluvial bed.

Afterwards, the process of elevation may have been as gradual as that of the shores of the Gulf of Bothnia, which amounts only to two or three feet in a century.

In corroboration of this view I may mention, that although the rocks are nearly horizontal, yet the hills which skirt the shores of this beautiful stream are often seen cracked from the base to the summit, and the strata, in places, much disturbed.

Also, the dark, yawning gorges, and broad and deep ravines, cutting entirely through the hills, indicate, I think, that the rocks here of the ancient coal measures have undergone great disturbance since the period of their original deposition.

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*Notice of American Animals, formerly known, but now forgotten or lost.*

BY JOHN LE CONTE.

The writers of the last century have left us descriptions of several animals which modern research has not since been able to detect. In looking over the works of these authors, who favored the world with their knowledge so long ago, it necessarily happens that we find their descriptions more or less imperfect, either from the insufficient manner in which they were made, or from that brevity of expression which was then fashionable in natural science. Hence

has arisen much confusion and indecision. I have selected from these writers of a former age, the following animals which appear to have been then well known, but are now forgotten or overlooked; I beg leave to call the attention of naturalists to this subject, with the hope that they may be all found and accurately described, or else struck out from the number of those enumerated among the productions of America.

*Felis rufa*, or Bay Cat of Pennant, Arc. Zool., vol i. p. 51.

With yellow irids, ears erect, tufted with black long hair; color of the head, body, and outside of the legs and thighs a bright bay, obscurely marked with dusky spots; the forehead marked with black stripes, from the head to the nose; cheeks white, varied with three or four incurvated lines of black; the under and upper lip, belly, and inside of the legs and thighs white, the inside of the upper part of the fore legs crossed with two black bars; the tail short, upper part marked with dusky bars and near the end with one of black, the underside white; fur short and smooth; twice the size of a common cat, (that is 27 inches long,) said to come from the interior of New York: probably erroneous. Described by Mr. Pennant from the living animal.

The common wild cat of our country, found in all the northern, southern, and western states, has in latter years been confounded with this species; I think, however, they cannot but be distinct. Mr. Pennant, the best naturalist that England has ever produced, could never have confounded two animals so dissimilar. It is true, in describing one, he had before him the living animal, in the other a dried skin, but of the last, he could examine hundreds. He certainly could not have mistaken the indistinct brownish grey of the one for bright bay, nor could the last color have faded into the other.

The common wild cat, however, never should have been called *Felis rufa*, even if it was identical with Pennant's animal, as Ray had described it in his *Synopsis Methodica Animalium*, p. 169, as *Catus montanus*. If these two animals are the same, why has the name given so long even before the birth of Pennant, been discarded, in defiance of the rule of priority in nomenclature; when it was last described, it was easy to restore the name of *montanus*. A just regard for the name of Ray, if nothing else, surely demanded this.

A description follows of the *Felis montana*, as I knew it in Georgia, made from numerous specimens either living or recently killed, including probably every variation to which the animal is liable.

*Felis montana*. Mountain Cat, Pennant, Arc. Zool., vol. i, p. 51. *Catus montanus*, Ray, *Synops. Method. Animalium*.

Above, hair mixed dusky, and pale brown, top of the head brown striped longitudinally with dusky, cheeks with dark brown, back with dusky; the last sometimes wanting. Irids yellow, ears black, upright, and slightly pencilled, especially during the winter; with a broad, transverse, cinereous bar. Cheeks on each side with a large semicircular tuft of long hair. Legs spotted with dark brown, sides most frequently obscurely spotted with the same, sometimes, however, not spotted; chin and throat white, with a black stripe on each side, forming an angle; sometimes these stripes are wanting, or very faintly marked in pale brown. Belly, inside of the thighs, and hind part of the fore legs whitish, spotted with black. Tail, above, generally very faintly annulate with brown; these rings often disappear; tip black, beneath white, which color appears on the upper part at the tip, whenever the hair is in any way disturbed. Feet beneath dusky or dark brown.

Mean length of 12 specimens 31 inches, tail 6.

I have given the foregoing very full description, that it may be compared with the preceding. Most of the marks which are common to the two, belong to almost every species of the genus *Felis*. I add two obscure species, of which but little is known. I am not willing to pronounce them distinct from each other or from the *montana*, without farther examination. The first was seen in California by my son, and the description and measurements were made by him; the other is extracted from Lewis and Clarke's travels.

*Californian Wild Cat :*

Above, mottled white, black, and fuscous, lighter on the sides, which are slightly barred; beneath, white; legs fuscous, with black bars, much more distinct on the anterior ones, which are anteriorly white. Ears large, rounded, black, with a white spot connected with the mastoid part, tip with a short tuft. Tail short, blunt, barred with darker, tip black with an extreme white point.

Length 31 inches, tail 6, head 4.5, height 1.5.

*Lewis and Clarke's Wild Cat :*

Larger than the wild cat of the United States; color of the back, neck, and sides reddish brown, irregularly varied, with small spots of dark brown, tail two inches long and nearly white, except the extremity which is black; it terminates abruptly, as if amputated. Belly white, variegated with small black spots, legs of the same color as the sides. The back is marked transversely with black stripes; ears black, on the outer side covered with short fine hair, except at the upper part, where it is furnished with a parcel of fine, straight, black hair three-fourths of an inch long. The hair of the animal is long and fine.

This animal was called by Rafinesque, *Felis fasciata*. I have declined adopting his name, as he never saw it, and was too much in the habit of describing things by hearsay, with as much confidence as if he had himself procured them, and had them lying before him. A drawing or an engraving was sufficient for him to make a new genus from, as was often the case, I am sorry to say, with authors of more credit.

Both Charlevoix and Dupratz, mention a species of *Felis* in Louisiana, which appears not to have been lately seen; they call it *Pichoux*; the following is a description of it—

*Pichoux :*

Upper part of the head, neck, back, sides, shoulders, and thighs bright tawny, face striped downwards with black, shoulders and body marked with stripes and large oblong black spots, the legs with small spots, breast and inner side of the legs and thighs whitish, spotted with black; tail long, marked with black, tawny, and grey.

Size of a common cat, (about 18 inches).

Does not appear to be the *Felis pardalis*, from its smaller size, and probably different markings, besides being in some of the under parts white. If this animal is no longer found in Louisiana, it is highly probable that it may be met with in Texas or New Mexico. Animals at one time extremely common in any particular country, will suddenly leave it without any visible cause. As an instance of this: previous to the year 1820, no bird was more common in that part Georgia where I resided, than the *Conurus Carolinensis* or Parakeet. They would pass through the air in flocks of from 50 to 100. They suddenly all disappeared, and for more than thirty years, not one has been seen where they were so abundant. Travellers through Texas and New Mexico, would do well to look for this beautiful species of cat.

The *Chat sauvage*, described by Dupratz, vol. ii., p. 93, is an animal well worth enquiring about. He thus describes it:—

*Chat sauvage :*

He says that it does not feed on animal substances, but on fruits, bread, and other vegetables. It seems that it was easily and often tamed. It is gentle and frolicsome, and not more than 8 or 10 inches high and about 15 long. The head like that of a fox: when tamed the color is grey; when wild, red: its paws have long toes and short claws; it has improperly been called a cat, as it has nothing of the cat about it but its activity, and bears a greater resemblance to the marmot.



*Silvery Fox*, of Louisiana, Penn. l. c., p. 48.

With a fine and thick coat of a deep brown color, overspread with long silvery hairs of a most elegant appearance. They differ from most other American species in their habit of burrowing. The description is borrowed from Dupratz, vol. ii., p. 92.

This can hardly be the *Canis velox*.

Pennant in Supp. to Arctic Zoology, p. 52, mentions a whitish grey fox, no larger than a hare, common among the Archithinne Indians, 4000 skins of which have been brought in one year to the British factories.

*The Comanche Dog* :

Common among the Comanche Indians. Naked, except a few stiff hairs about the mouth. This dog is mentioned by Clavigero, vol. i., p. 56, as an inhabitant of Mexico, called by the natives *Holoitzuicintli*. It is remarkable that though some of these dogs have been brought within the United States, we have no description of them: they are quite large, being upwards of two feet high, and used by the natives for hunting. Here is an instance of the absurdity of those writers who state, that climate has an influence in altering the appearance of animals; thus they tell you that the so-called Turkish dog, which is hairless, has been made so by its progenitors living for numerous generations in a warm climate; now here we see an animal equally naked, which inhabits the mountains and cold steppes of the south-west. Of a similar character is the assertion that sheep lose their wool in the Southern States, and in the West India Islands.

*The Water Rat* of Pennant, l. c., p. 130.

With small eyes, ears covered with fur, teeth yellow, body covered with long black hair, mixed with a few of a rust color, belly of a deep grey.

*A Mouse of Louisiana* :

Mentioned by Dupratz. Not larger than *Mus musculus*, of a very bright bay.

These are all the mammals which I can collect, as worthy of being called imperfectly known, or rather lost to modern naturalists. I now proceed to consider the Birds.

*Vultur sacra*: Bartram's Travels, p. 150.

The head and neck are bare of feathers nearly down to the stomach, where the feathers begin to cover the skin, and soon become long and of a soft texture, forming a ruff or tippet, in which the bird, by contracting his neck, can hide that as well as the head; the bare skin on the neck appears loose and wrinkled, which is of a very deep bright yellow color, intermixed with coral red as it approaches the yellow of the sides and fore part. The crown of the head is red; there are lobed lappets of a reddish orange color, which lie on the base of the upper mandible. But what is singular is, a large portion of the stomach hangs down on the breast of the bird, in likeness of a sack or half wallet, and seems to be a duplicate of the craw, which is naked and of a reddish flesh color, this is partly concealed by the feathers of the breast, unless when it is loaded with food, and then it appears prominent. The plumage of the bird is generally white or cream colored, except the quill feathers of the wings and two or three rows of the coverts, which are of a beautiful dark brown; the tail which is large and white, is tipped with this dark brown or black, the legs and feet are of a clear white; the irids golden; the pupil black.

The tail was used by the Seminoles as a war standard. Dupratz, vol. ii., p. 109, mentions this bird under the name of White Eagle, and says that the Indians in whose neighborhood he lived, the Natchez, used the feathers for adorning their pipe of peace.

*Ferruginous Woodpecker*: Pennant, l. c., p. 271.

With a dusky bill, the crown and pendant crest of a pale yellow; a crimson bar extends from the mouth along the lower part of the cheek. The cheeks,

back, and coverts of the wings are of a deep ferruginous color, lower part of the back of a pale yellow; primaries ferruginous, barred on their inner webs with black.

Sent from South Carolina to Mr. Pennant, by Dr. Garden; therefore there can be no doubt of its having been obtained near Charleston, although no one has ever seen it since. The high character of both these gentlemen forbids us to suppose that there was any deception on either side, either in sending the animal to Europe, or in its habitat.

*The Florida Pheasant :*

Mentioned at page 20 of Stork's introduction to John Bartram's Journal of Travels in East Florida.

I have had described to me a bird, which must have been this, as inhabiting the hummocks on the banks of St. John's River, but I never had the good fortune to meet with it.

*Norton Sound Bustard*, Penn. vol. iii., p. 321.

A Captain Rich informed Mr. Pennant, that at Norton's Sound, in latitude 64° 30', he had seen great flocks of a large bird which were very shy, ran very fast, and for a considerable way before they took wing, so that he could never get one shot.

*Black Ibis*, Bartram's Travels, p. 148.

Black on the upper side, breast and belly white, legs and beak as white as snow. Size of Ibis alba.

*Red-billed Heron*, Pennant, Supp., p. 65.

With a red bill. Irids yellow, legs green, plumage white.

There are many of the smaller birds of America described by Pennant, that I am convinced are not now known, and many more that have lately been described as new species, that were well known to the English naturalist. Not being, however, sufficiently acquainted with the ornithology of our country, I cannot, without devoting too much time to the subject, determine which they are. It has all along been the custom with American naturalists, entirely to neglect everything that this illustrious man and elegant scholar has written on the subject of our animals; but it would be a labor well repaid by the thanks of every lover of science, if any one would go over his Arctic Zoology, and give us the scientific names of every thing which he has described.

There remain only a few reptiles to be added to this list: there can be no difficulty in obtaining them if they really exist, and I cannot see how any one can doubt of their existence. A very little attention on the part of persons living where they are said to be found, would soon make us acquainted with them.

*Trionyx*, of Bartram. Travels, p. 177.

They are flat and thin, two and a half feet in length, and eighteen inches in breadth across the back; in form resembling the sea tortoise, the whole back shell except the vertebræ or ridge, which is not at all prominent, and ribs on each side, is soft and cartilaginous, and easily reduced to a jelly when boiled; the anterior and posterior extremities of the back shell appear to be embossed with round horny warts or tubercles; the belly or nether shell is but small and cartilaginous, except a narrow cross bar connecting it at each end with the back shell, which is hard and osseous; the head is large and clubbed, of nearly an oval form, the upper mandible is however, protruded forward and truncated, somewhat resembling a swine's snout, at the extreme end of which the nostrils are placed; on each side of the base or root of this proboscis are the eyes, which are large. The upper beak is hooked and sharp like a hawk's bill; the lips and corners of the mouth large, tumid, wrinkled and barbed with long pointed warts which can be projected or contracted at pleasure, which gives the creature a frightful and disagreeable countenance.

Inhabits St. John's river, Florida.

It is a remarkable circumstance, that although this tortoise is found as it were at our very doors, no one has ever seen it since the venerable author of the pre-

ceding description noticed it in his travels. There can be no doubt of its existence in St. John's river of Florida, and that it can be obtained at any time. Although it is represented in the figure attached to the description with five claws on all the feet, this does not detract from the truth of the account. If this be an error, I attribute it to his not having made a complete drawing of it at the time when he first saw it, and afterwards having finished it from memory; from this may have resulted the error, if there is one. Although I do not see any more difficulty in a *Trionyx* having claws on all his toes, than in a *Cistudo* having three claws when it has five toes; in this case there is a subtraction, in the other an addition. It has been said that this was an incorrect and exaggerated figure of the *Trionyx spiniferus* (*spinifer*) of Lesueur. Nothing can be more absurd than this assertion. Lesueur's species has on the front part of the carapace a series of small pointed warts not easily discoverable, while Bartram's animal has larger extensible and contractile tubercles on the head and neck. I remember when it was much the custom to ridicule Mr. Bartram, and to doubt the truth of many of his relations. For my own part I must say, that having travelled in his track I have tested his accuracy, and can bear testimony to the absolute correctness of all his statements. I travelled through Florida before it was overrun by its present inhabitants, and found every thing exactly as he reported it to be when he was there, even to the locality of small and insignificant plants. Mr. Bartram was a man of unimpeached integrity and veracity, of primeval simplicity of manners and honesty unsuited to these times, when such virtues are not appreciated.

*Apalone hudsonica*, Rafinesque, Annals of Nature, p. 3.

Upper shell rounded-elliptical, flat, entire, soft, with a small anterior keel, yellowish with brown spots, and a circular black line near the margin. Two long oculated spots before and behind the eyes. Nose proboscidal; jaws without a bill. Lower shell anterior. Body denudated behind. Tail obtuse, mucronate, shorter than the shell. Five palmated toes to all the feet, with small claws. Length 2 to 6 inches.

Found in the Hudson river between the falls of Hadley, Glen, and Baker, and further up to the source. Called *Mud Turtle*.

Although this description was published long ago by Rafinesque, no one, that I know of, has ever thought fit to look for the animal. Now, although Rafinesque was certainly insane and apt to see and describe things which had no real existence, yet when his descriptions appear full and complete, and his localities accurately specified, it certainly is worth while to look for the objects he professes to have seen. Why do not some of our young naturalists take such things in hand? Advancing age forbids me.

*The slender Lizard*, Penn. Supp., p. 86.

About eight inches long, as slender as a crow-quill; head small, tail blunt and of equal thickness; body marked from head to tail with lines of pale brown and black, belly lead color; top of the nose and tail white.

*Salamandra*.

I once saw, and indeed had in my possession, a Triton or Salamandra, which was sent from New Orleans, of which the following is a short description. I add it in this place because it was a most extraordinary animal.

Dusky, speckled with yellowish white, and inclining to brown on the belly; everywhere except on the belly and tail covered with small warts, so as to resemble shagreen; tail blunt, with a narrow fin wrinkled longitudinally and transversely so as to appear striated and articulated. Length 5 in. .75.

The preceding are all the animals which I can find that have once been more or less particularly described, but of which at present no one knows anything. I might have added to the list many that have been described by Rafinesque, but the most of them appear in their coloring, as well as in other characteristics, so opposed to everything known of congeneric species, as to render it extremely probable that the author was laboring under some delusion when he published

them. It is well known that he was in the habit of describing things which he never saw, and in his eagerness to claim a priority in discovery, to describe the same object two or three times over under different names.

It is to be hoped that the reading of these few pages will turn the attention of naturalists in the Southern and Western States to the investigation of the few species pointed out as forgotten or lost, and that we will not remain long without knowing whether they have a real existence.

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The Committee on Mr. Conrad's "Synopsis of the Genera Parapholas and Penicilla" reported in favor of publication in the Journal.

A report was read from a Committee appointed at the meeting of 3d inst., to inquire into the expediency of having an Address delivered before the Society at its Anniversary on the 21st of March next, and to nominate a suitable person to prepare such an Address, recommending the same, and nominating Wm. Parker Foulke, Esq.

The Report was adopted and the nomination confirmed.

A Report was also read and adopted from a Committee appointed at a late meeting to enquire into the expediency of assembling the members of the Academy at an Anniversary Dinner on the same day, (21st of March,) and in favor of the same.

A Resolution was also adopted, appointing a Committee of Arrangements for the occasion.

Committee, Dr. Ruschenberger, Mr. Cassin, Prof. Carson, Mr. H. C. Hanson, and Mr. Wm. P. Foulke.

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#### ELECTION.

Lieut. D. M. Couch, U. S. A. was elected a *Correspondent*.

The Society then elected the following list of Standing Committees for 1854.

#### *Committees for 1854.*

*Ethnology*, John S. Phillips, B. H. Coates, M. D., J. Aitken Meigs, M. D.; *Comparative Anatomy and General Zoology*, Joseph Leidy, Edward Hallowell, John H. Brinton; *Mammalogy*, John Le Conte, James C. Fisher, Samuel W. Woodhouse; *Ornithology*, John Cassin, Edward Harris, George A. McCall; *Herpetology and Ichthyology*, Edward Hallowell, John Cassin, Gavin Watson; *Conchology*, T. A. Conrad, Thos. B. Wilson, W. S. W. Ruschenberger; *Entomology and Crustacea*, S. S. Haldeman, Wm. S. Zantzinger, Robert Bridges; *Botany*, Robert Bridges, Wm. S. Zantzinger, Elias Durand; *Palæontology*, Thomas B. Wilson, Joseph Leidy, Charles E. Smith; *Geology*, Isaac Lea, Aubrey H. Smith, J. P. Lesley; *Mineralogy*, William S. Vaux, Samuel Ashmead, John C. Trautwine; *Physics*, James C. Fisher, B. Howard Rand, Edmund Draper; *Library*, Robert Pearsall, Wm. P. Foulke, H. C. Hanson; *Proceedings*, Wm. S. Zantzinger, Joseph Leidy, W. S. W. Ruschenberger.