

Amateur Photography.

With the recent improvements in materials and apparatus for photographing, there has come a great accession to the ranks of those who, in all parts of the country, find in this interesting study a pleasurable, inexpensive, and sometimes lucrative employment. As is the case, however, in almost every wide-embracing field of activity, there is no noticeable success attained except by those who make diligent and intelligent application, and this is particularly true with the large number of amateur photographers, who find it so easy to learn the principal elements of what is necessary to make sun pictures before they realize how important it is to have also some artistic taste and education, and learn the nicety of manipulation required in a thousand delicate details which the successful photographer must carefully attend to. This is abundantly indicated in the discussions which take place before the numerous societies of amateur photographers, now springing up in all sections; but the genuine pleasure to be got out of a little patient application in this field, and at very slight expense, appears to be sufficient to insure its steadily growing popularity. One of the leading societies of this kind, that of the Amateur Photographers of New York, is noticed at length in a recent number of *Anthony's Photographic Bulletin*, with a photograph of the President, Mr. F. C. Beach, from a negative made with the electric light. Mr. Beach commenced making pictures as an amateur photographer in 1864, when only sixteen years of age, and has continued to do so ever since, so there seems to be an especial fitness in his occupying the position of first President of the Society of Amateur Photographers of New York. Mr. Beach has himself invented some and improved many of the old processes in photography, and being something of an enthusiast in this line, it is not strange that the society of which he is the head should at once have taken a leading position.

PLANCHETTE.

Planchette is now very seldom met with, and so many questions are constantly sent to the office of this paper concerning it, that we reproduce herewith an illustration of one which appeared in the *SCIENTIFIC AMERICAN* in 1868.

Many think that there is some hidden secret in the construction of planchette. This, however, is a mistake, as all that is necessary is that the parts should be nicely joined, and that it should stand firmly and move readily on its legs. Any one with ordinary mechanical skill can put one together, and the accompanying cut shows clearly all that is necessary—a heart-shaped cedar board, with two nicely turned metal legs, carrying well lubricated casters, the point of the board having an aperture of suitable size for the insertion of a lead pencil, which serves as the third leg and rests on the paper. It is not to be supposed that planchette will yield at once to the influence, for it is very willful, and often, when it does begin to move, simply speeds across the paper, scribbling incoherences. One of the most extraordinary traits of planchette, however, is the way in which it will persist in writing repeatedly a meaningless reply, until suddenly the humor will seize it, and it will write a coherent word or sentence. Planchette first made its appearance in 1867, and was by no means slow in attracting almost universal attention. The pranks that it was made to play were so many and curious, and its ways so mysterious, that not only did it become the nightmare of the superstitious, but it afforded amusement in many a household. It became also the subject of investigation by some scientists. Marvelous tales were told by the credulous about it, and planchette often told curious tales about itself. Even as distinguished scientists as Prof. Tyndall and Prof. Faraday were drawn into controversies concerning it.

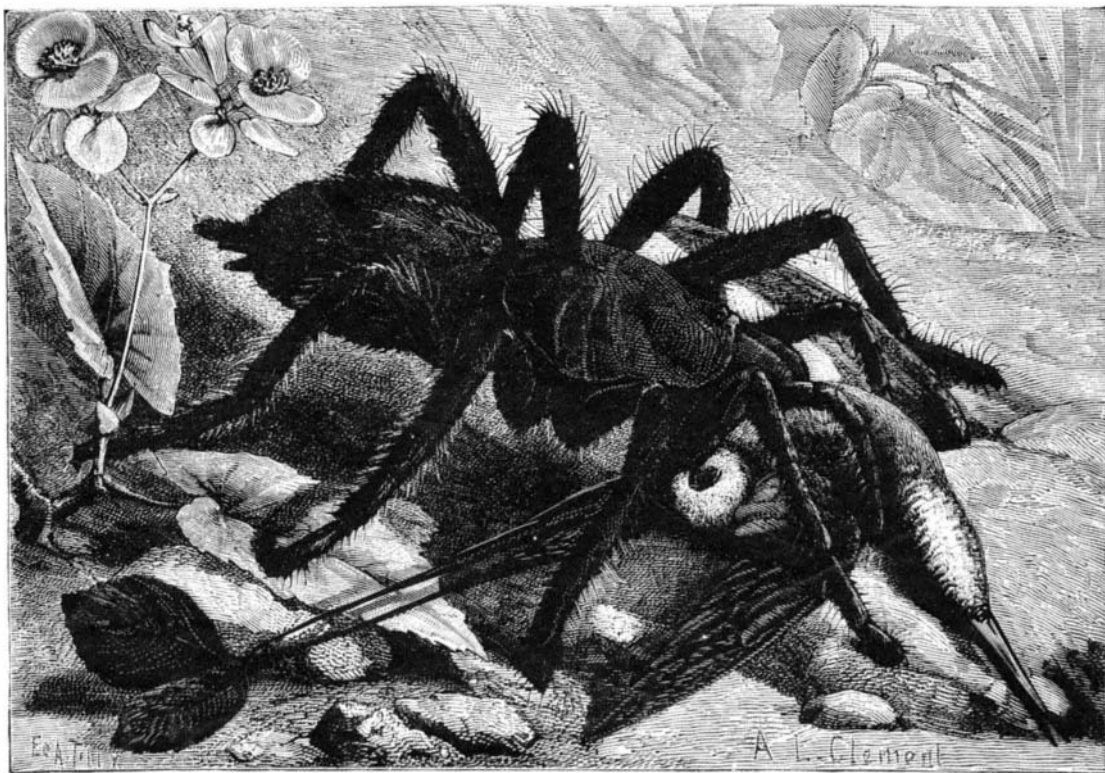
Many believed that humbug was stamped over every movement of planchette, and that one or the other of those whose hands bore upon it always conspired with the little board in the formulation of its replies; but when it became evident that planchette would write coherent answers while under the influence of those who were in ignorance of the replies that were expected, it became necessary to explain the phenomenon on some other basis. Whether this has ever been satis-

factorily answered is in the minds of some still a question. Certain it is that planchette has performed some curious feats, and has made for itself a position in the world of mysteries. Probably the most generally accepted explanation is that advanced by Lewes and others, that although there is no intentional movement of the hands of those who are subjecting planchette to the influence, still there is, in spite of this, an unconscious pressure of the finger tips upon the board, which directs the movement of the pencil. Nor does it seem that such can be at all unlikely, for unconscious movement is by no means an unusual phase of our existence. The somnambulist who nightly takes a promenade from cellar to garret, or whose steps by chance have led him to the border of a pre-



PLANCHETTE.

cipice, has a little knowledge of the peril he has escaped when the morning beams have awakened him as planchette is conscious of its movements. How often also in mercantile pursuits do those who are accustomed to a certain routine perform it unconsciously, and after the work has been finished would be unable to tell you of many of the details of the work which custom has taught them to perform correctly, even while in a state of abstraction. Much has been said at times of planchette's prophetic nature. Under the influence of certain people of a highly nervous temperament, or having to a certain extent the qualities of mediums, future events are said to be foretold. Secrets of which the person touching planchette is in ignorance have been divulged in a remarkable way, and many anecdotes draping planchette in mystery are repeated and believed. Were the testimony, however, more universal, were planchette more consistent, and were it more generally truthful and less given to uttering remarkable sayings only occasionally,



THE BIRD SPIDER. (Natural Size.)

there would be more reason for according it a place for thorough and systematic investigation. Perhaps the day will come when mesmerism is understood and mind reading is more satisfactorily explained, that there will be occasion for looking upon planchette more seriously, and of regarding it as a wonderful means of displaying a rational nervous action independent of conscious mental cerebration.

THE BIRD SPIDER.

Few animals are more repulsive than the gigantic spider which we figure herewith, of natural size. The bird spider (*Mygale avicularia*), for so the creature is called, excites horror in all the countries in which it is found.

In the Antilles and in the forests of Venezuela, Brazil, Guiana, and Ecuador, its repulsive aspect has, among the residents, as well as among travelers, caused a terror that the imagination of the aborigines has still further exaggerated. How many times, while lying in my hammock during the long equinoctial nights, have I heard the Indians and peons, while squatting around the camp fire in the virgin forest, tell each other stories, or fables rather, whose inexhaustible theme was serpents, bats, and big spiders! In measure as the night advanced, the tales became more and more extraordinary. From hecatombs of birds devoured upon their nests by the *Arana cangrejo* (crab spider), with long velvety legs and poisonous jaws, the orator passed to more dramatic facts, and the last flickerings of the dying embers often lent their fantastic accompaniment to a story about a child whose blood had been sucked while it lay in its cradle!

Freed from these local exaggerations, which are so frequent among these weak minds in a state of nature (and examples of which might be easily found nearer home), the history of the bird spider still remains sufficiently interesting to merit being narrated and be better known.

Linne described this species under the name of *Aranea avicularia*, the specific name recalling the animal's habit of feeding at times upon young birds, and even upon adult humming birds, captured upon the nest. The celebrated entomologist Latreille in 1802 established the genus *Mygale* for Arachnids of the tribe Theraphoses. All the individuals included in this group are hunters, and live either in nests constructed in the earth or in the clefts of stones and under the bark of trees, like the species that forms the subject of this article. Some of them are wonderfully skilled workmen, as the mason spider (*M. cementaria*, Latr.), of southern France and the pioneer spider (*M. fodiens*, Walck.) of Corsica.

The habits of the bird spider are not so well known as those of the ones just mentioned, either because from its hunting being done at night it is rarely met with, or because it selects retreats that are not very accessible. There are few authors to be found, however, who have correctly spoken of this curious and dreaded spider; several of them have copied one another, and others have devoted themselves especially to its anatomy. During the course of my travels in equinoctial America I have several times had an opportunity of seeing the bird spider in a state of nature, and it will perhaps be permitted me to add a few personal observations to those of the travelers who have preceded me.

Of the several hundreds of spiders that have been described, this is the largest. The largest specimen that I captured (the one that served for making the annexed portrait) measured exactly, with legs stretched out, 7 inches in diameter. The first one I saw was at Martinique, not far from Saint Pierre, in the trees skirting a road. Its nest was suspended from the branch of a *Palicourea*, an elegant shrub of the Rubiaceæ, and its appearance strikingly recalled those large caterpillar nests that we so frequently find upon the Aleppo pine (*Pinus halepensis*) on the mountains in the vicinity of Cannes and Nice. It consisted of a beautiful white silken tissue, of several thick layers, strengthened by very strong threads capable of arresting a small bird. In the center were placed the eggs, perhaps 1,500 or 2,000 in number. As soon as the young are hatched and escape from the cocoon, large red ants of the genus *Myrmica* wage a bloody war on them, and feast upon their whitish flesh of no consistency and without hairs. Such destruction happily counterbalances the ravages that the spider would make were it to multiply too abundantly. In fact, the adult animal, whose body measures no less than 4½ inches in length, not including the legs, is as ferocious as its aspect implies. Its entire body bristles with long reddish brown hairs. Its eyes, eight in number, are strangely grouped upon a small elevation (cephalothorax); six of them are arranged in a triangle on each side, and the two others are separate at the apex of the warty prominence. At the extremity of the strong, black, smooth jaws are the palpi,