

THE HOWLING MONKEYS AND THE PINCHES IN THE BERLIN ZOOLOGICAL GARDEN.

Visitors to our Zoological Garden do not often see American monkeys, except the importunate capucine, which presses to the bars with its whining, begging cry, and the dwarfish marmosets, which always run away to their boxes, making a frightened noise like the twittering of a bird; and, therefore, it is with great pleasure that I have increased the large collection of monkeys here by the addition of a few specimens from the new world, thus giving the public some idea of the riches of the animal kingdom of South America. The accompanying engravings show two remarkable specimens, the howling monkey and the pinche.

It is very difficult to keep the howling monkeys. They are seldom brought alive to Europe, and even if they do outlive the voyage, they usually live only a few weeks in our monkey houses. Nevertheless, when a specimen was offered me under particularly good conditions, in the early part of the year, I decided to buy it. He was a strong and quite well grown fellow, about the size of a small cat, healthy and lively, that is, as far as it is possible to speak of liveliness in connection with a full grown howling monkey. The phlegm of

in the still wood, and meanwhile the bearded singers gaze at one another in the most stolid, serious manner. The howls of these monkeys are heard so far (Humboldt gives the distance in one particular case as nearly a mile, which was paced off from an isolated cluster of trees) that it is only natural to draw the conclusion that a voice so out of proportion to the size of the animal must be due to peculiarities of construction, and this is the case, for the hyoid bone is changed, in this animal, into a hollow, resounding drum, and the larynx is provided with several pouches which catch the voice. Besides these remarkable anatomical peculiarities the mycetes are characterized by the possession of a muscular, partially bare tail and a well developed thumb on the fore hands.

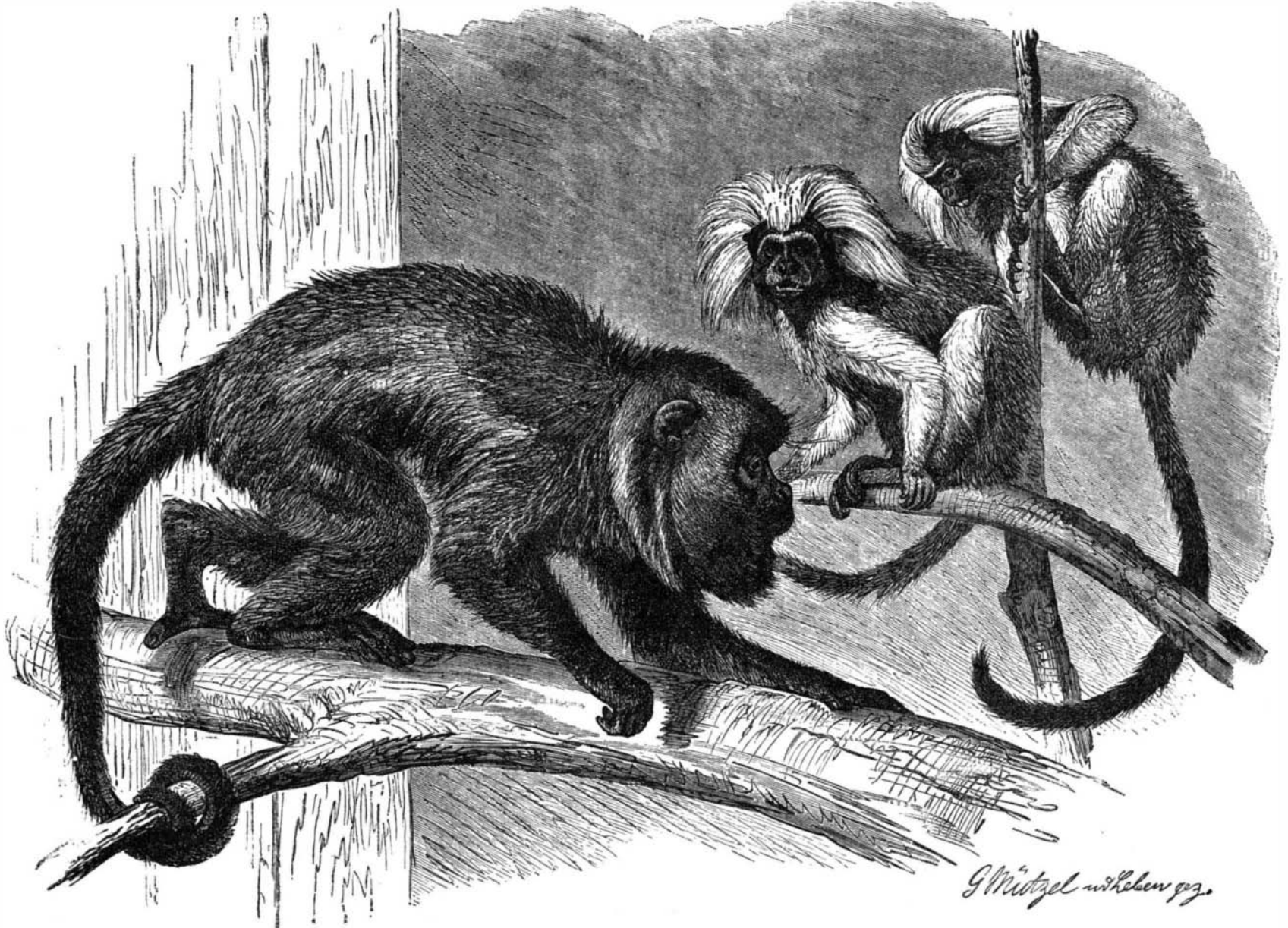
The howling monkeys inhabit nearly all parts of South America, but are particularly numerous in the eastern portion of the continent. In the Brazilian forests they are, according to Hensel, among the commonest of the animals which are invariably met on every hunting expedition.

The pinche (*Hapale ædipus*, Wagn.) is quite the opposite of the bristly, bearded, dark, uniformly colored howling monkey, being a trim, light colored little

pared with other monkeys. As the pinche is the least hardy of all the frailer monkeys, it is a rare sight in our zoological gardens, and I consider it a remarkable piece of good fortune that a couple of these little things have been kept here in good condition for more than a year. Whether this is due to the fact that they have been fed according to the advice of Brehm, I cannot say. All the different species of monkeys of this family inhabit limited districts which are often sharply defined by great rivers, and the pinche is no exception to this rule, for it is found in a very limited portion of the South American continent, coming from New Grenada, where it lives secreted among the trees, just as the squirrels do, and in this quiet life they are molested only by the eagle and man.—*Illustrirte Zeitung*.

The Electric Erygmatoroscope.

At a recent meeting of the Académie des Sciences, M. G. Trouvé described an electrical appliance devised by him to facilitate the inspection of the geological strata pierced by the boring tool. The apparatus consists of a powerful incandescent lamp inclosed in a cylinder. One of the hemicylindrical surfaces of this cylinder constitutes the reflector, while the other,



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his nature is so great that nothing could force this creature to make a quick movement, to say nothing of a great spring. When my charge is enticed from the top of his cage by my call or a dainty morsel in my hand, it is always a trial of patience for me, for he requires considerable time simply to make up his mind to start. No move is ever made by grasping the perches and bars of the cage until the body has been firmly anchored by means of the tail. How can anything that is so accustomed to being held from behind hasten forward? This use of his tail is certainly the main reason for his slow, awkward movements. According to all South American travelers, this same slow movement characterizes the howling monkey in his native haunts.

He might be said to vegetate, doing only what is necessary for the support of life, but this dull, listless existence is interrupted from time to time by the dreadful howls which give it its name. This "howling" seems specially remarkable when we consider the otherwise quiet life of the animal. Schomburgk and Hensel give an amusing description of the way in which, after having finished a meal, the oldest male, the leader of the band, begins to walk back and forth seriously on a horizontal limb, with his tail raised and uttering interrupted howls which sometimes resemble the grunting of swine and sometimes the roar of the jaguar. As these sounds follow each other quicker and stronger and the climax of the solo is reached, the whole chorus joins in lustily until the sound is terrible

creature. Its white limbs show very prettily against the dark trunk, and the "artist-like" mane falling smooth on its neck forms a strange background for the dark face with its bright eyes. This long hair on its head is the main characteristic of the little creature, and distinguishes it from its nearest relative, the golden maned marikin—the whole of whose body is covered with long hair—and the numerous other monkeys which the pinche closely resembles in its organization. The monkeys of this family differ from the ordinary monkeys in their dwarfish stature, the long, curved and pointed claws with which all their fingers and toes are provided, and in the formation of the thumb, which is not opposable. On the whole these monkeys bear a close resemblance, in their forms and movements, as well as in their lack of intelligence and their restless, anxious dispositions, to the rodents, especially those that climb, such, for instance, as the squirrel. According to the reports of explorers, their resemblance to the squirrel, in the way that they move among the trees, climbing the trunks in a screw-like path, etc., is striking, and they are, therefore, called squirrel monkeys.

The differences between the different species of this family are mostly external, and all that can be said of the family in general applies also to the pinche. It is a very interesting little dwarf monkey, which at first receives much attention, especially from ladies, but much of this good impression is lost on better acquaintance, on account of its lack of intelligence as com-

which is of thick glass, allows the luminous rays to pass through it, and light up the successive strata through which the lamp descends. At the base of the instrument there is an elliptical mirror, while the top is open, so as to enable an observer placed at the head of boring and armed with suitable glasses to see on the mirror the reflected image of the stratum illuminated by the lamp, which is arranged so that its upward rays are intercepted. The whole apparatus is suspended from a cable formed by the two conducting wires. This cable is wound on a drum, the trunnions of which are insulated from one another, and connected to the leads, current being obtained by two rubbing contacts attached to the poles of a portable battery. This arrangement enables the instrument to be raised and lowered without difficulty and without interrupting the observations. The erygmatoroscope as at present arranged gives excellent results down to a depth of over 600 feet, and with a more powerful lamp it could be used at still greater depths.

Impermeable Glue.

To make an impermeable glue, soak ordinary glue in water until it softens, and remove it before it has lost its primitive form. After this, dissolve it in linseed oil over a slow fire until it is brought to the consistence of a jelly. This glue may be used for joining any kinds of material. In addition to strength and hardness, it has the advantage of resisting the action of water.—*Bevue Industrielle*.