

mantle. The shamans administer 'taya,' which infallibly kills the culprit, either directly or within a few weeks, or even months, a point under the control of the poisoner. Naturally the Uapé women regard Jurupary and his mantle with becoming terror, which centres about the celebrations called 'dabucuri,' at which the mantle is exhibited to the males of the community.

These occasions are prepared for by a fast of two or three days. There are six dabucuri in the year, each determined by the ripening of a certain fruit, of which an intoxicating drink is made. They come in January, February, March, May, July, and November. The ceremonies last three days, and people come from fifty miles around to attend.

The time come, the adults paint themselves with black and red, and sing monotonous and dismal chants; and the shamans perform, for those desiring such service, the marriage rites, which seem to much resemble the civil rites of European marriage.

Later all the women are sent into the forest, and watched by a keeper. At the end of an hour, after the paxiuba has been sounded by men in festal attire, two or three shamans dressed as Jurupary, and covered with the sacred mantle, with thumbs and two toes on each foot hidden, the other fingers and toes fitted with long claws like the legendary god, appear in the feast-house, jumping on all fours, and striking with a stick, right and left, blows on the spectators, which are not returned. All this takes place in perfect silence, and terminates by the disappearance of the shamans. After sounding the paxiuba for a quarter of an hour, the women are recalled. All carry rods, with which the men and women whip each other. If a white man arrives, he may be admitted provided he will consent to receive a few blows, which he may afterward return with usury. After the flagellation, the women form concentric circles, and the men a large circle, each with the right hand on the shoulder of the one in front of him. Each dancer has a shrill flute, which he sounds, and moves up and down, right and left, by action of the lips. They move with measured step, at first slowly, afterward according to their state of excitement. The dancers drink the intoxicating beverage prepared for the occasion, and soon begin to jump, gesticulate, and act as if possessed by some frenzy; the shamans calling on Jurupary to present himself, which, through them, he excuses himself from doing on the ground that the women would become changed into, or would give birth to, serpents. The dress of the dancers is at first as usual; but, as the saturnalia progresses, it is gradually dropped as incommensurable. Pro-

miscuous intercourse between the sexes follows, with intervals of flagellation and inebriety, until exhaustion or daylight closes the performance for the time.

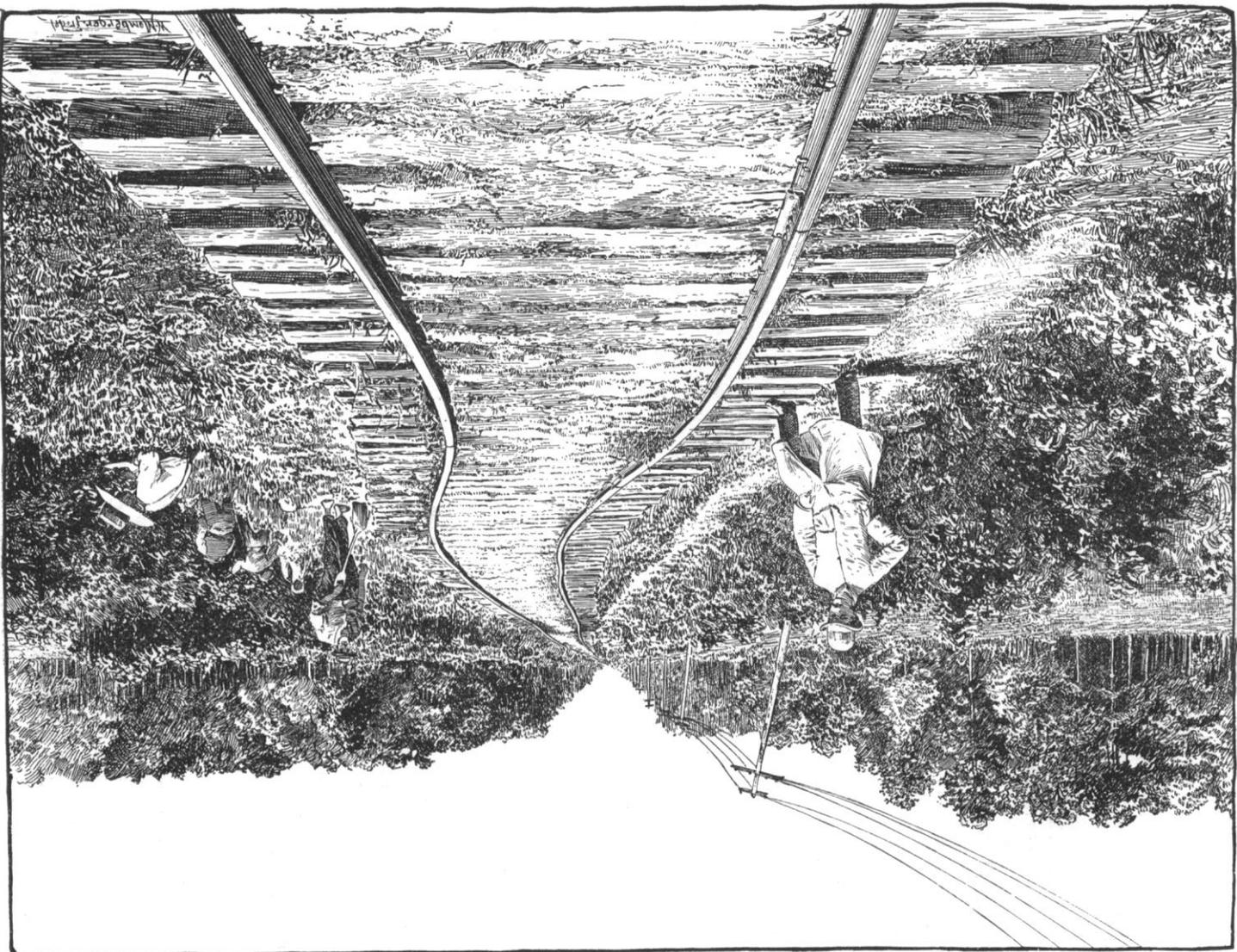
These horrible orgies are supposed to have been directed and planned by Jurupary himself, and to represent the character of the heaven to which his faithful devotees will be translated after death. The fasts by which they are preceded are rigid and painful, well adapted to produce hallucinations and visions. Men who have adored the god will reach him after death; those who have not will lose themselves on the long and difficult way. Halfway is the abode of Bishiú, an inferior spirit, where are detained the souls of those women who have unintentionally gazed upon the sacred mantle, — a sort of purgatory, — or, according to others, they are turned into serpents or caimans. There is also an ill-defined inferno at the bottom of the earth, where the worst people bring up, after being lost on the way to heaven. Here they suffer frightfully, and are controlled by a sort of demon.

Although Coudreau rejects the idea of a civilized origin for these myths and practices, it must be allowed that there is a decided flavor of mediæval Europe in the virgin mother of the god, the sacrifice of the god himself by men, the purgatory, hell, and heaven, and even in the fasts and flagellations. It is much what might be expected from the reception at a distant period of some ill-understood and misconceived notions of Christianity, befouled, modified, and mixed with native myth; especially if we suppose that the reception of the original attempt at instruction was separated from the present time, as it must have been, if there were such, by a long period of non-intercourse with missionaries or civilization. This seems to us the most natural explanation of an isolated development, such as these myths are represented to be; and as such it would form a most interesting chapter in the history of the evolution of religions.

ANOTHER FEATURE OF THE RECENT EARTHQUAKE.

SOME remarkable features of the recent earthquake on our southern seaboard were illustrated and described in *Science* of Sept. 24. Through the kindness of the *Railroad gazette* we are enabled to present a view of the effect of the same earthquake upon a section of railroad-track. The view is an exact reproduction of a photograph taken near Ten-Mile Hill, on the South Carolina railroad, after the earthquake of Aug. 31.

According to the statements of persons familiar



with the locality, the track at the point shown was previously straight and level; the sharp double curve in the foreground, and the abrupt change of grade in the middle distance, being wholly due to the sudden movement of the earth's surface. A press despatch from Charleston on Sept. 2, in relation to a railroad accident at a point near that shown in the engraving, states, that, at the moment the shock was felt, it seemed to those on the train that the earth had suddenly given way; that the train plunged with frightful velocity down a steep declivity, was then raised by a terrestrial undulation, and, having reached the top of the wave, was hurled down an embankment by a sudden swerving of the earth to the right and left.

In many places along the lines of the railroads near the centre of disturbance, the track had the appearance of having been alternately raised and depressed, like a line of frozen waves. The movement of the earth had also been from east to west, bending the tracks in reverse curves, many of the curves taking the shape of a single, others of a double letter S.

A train near Jedburg was running along at the usual speed, at the time of the earthquake, when it suddenly seemed to leave the track and go up into the air. This was the upward wave. It descended with equal suddenness, and as it came down it was flung violently over to the east, the wheels apparently being raised some distance from the rail on the west side of the track. Then there was a reflex action: the train righted, and was hurled violently to the west, finally subsiding to the track and taking a downward plunge, evidently the descending wave. It was afterwards found that the train had passed over one of these serpentine curves with undulating surface, and very probably at the instant the movement of the earth was taking place.

THE TIMBER OF THE ENGLISH COLONIES.

ON Oct. 8 a large number of colonial visitors, together with some of the leading civil engineers, builders, timber merchants, and others interested in the employment of timber, assembled by invitation at the Chelsea works of Messrs. A. Ransome & Co., London, in order to witness a series of practical experiments with different varieties of colonial timber at present commercially unknown in England.

After the experiments, which were conducted with more than forty different varieties of timber from India and the colonies, and comprised tree-felling, cross-cutting, sawing, planing, moulding, morticing, tenoning, and boring, while the manu-

facture of such things as casks, doors, pick-handles, carriage-spokes, and railway-sleepers, was carried to its completion, and the articles exhibited to the assembled guests, Mr. Allan Ransome opened the proceedings by announcing the conclusions at which the recent experiments had enabled him to arrive in respect to the qualities of the different varieties of colonial timber submitted to his notice. He said, that, among the forty different species, some stood out as pre-eminently suitable for the English market. There were iron bark and mountain ash, from New South Wales, both suitable for wheelwrights' work, and the former, owing to its peculiar hardness, for piles and railway-sleepers as well; black-wood, from Victoria, suitable for carriage-building, cabinet-work, and case-making; Karri-wood and Jarrah, from western Australia, both useful for joiners' work, sleepers, furniture, and piles, of which he could say that there was no fault to be found; black-pine, red-pine, totara, and kauri, from New Zealand, which could be employed for furniture, cabinet-work, house-building, and general purposes, kauri being especially useful; Douglas fir and the swamp ash, from Canada, both suitable for building, joiners' work, etc., the latter being particularly sound, strong, tough, and cheap; yellow-wood, stink-wood, and sneeze-wood, from the Cape of Good Hope, the two former species suitable for furniture, building, and joiners' work, and the latter, from its unusual durability, for piles, posts, telegraph-poles, etc.; Billian and Serayah, from British North Borneo, the former suitable for beams, piles, and every purpose where durability was necessary, and the latter for furniture, veneers, etc.; and, lastly, Padouk-wood, from India, which was suitable for joinery, carriage-building, and furniture, was exceedingly plentiful, and was grown near the coast. Many samples of wood sent had unfortunately been too small for experiment; but of those operated upon he could say that they had all been found suitable, so far as quality was concerned, for their various purposes.

The Hon. Malcolm Frazer (western Australia) said, that, of the Karri and Jarrah timbers, there was a considerable supply in London at the present moment. Large quantities of several hundred loads of these species might be obtained at £7 per load, or in smaller quantities at a slightly higher price. Their cost was only half that of teak.

Prof. P. L. Simmonds (New Zealand) said that New Zealand produced a vast number of ornamental woods, as well as many useful ones. In the latter line, however, the colonists of New Zealand would not be able to compete with other