

## MISCELLANEOUS NOTES.

**No. I. Earth Tremors in Northern Siam.**

Phya Rajadet, the Governor of Chiengrai, has informed me that recurring earth tremors are experienced in the district of Wieng Papao almost monthly. This has been going on for some years. The whole district of Wieng Papao is very hilly. In the province of Chiengrai are many hot springs; some of them so hot that an egg can be boiled in their water within five minutes.

It is recorded that the ancient city of Yonaka, with several hundred thousand inhabitants, was completely engulfed during a violent earthquake, or eruption, not a soul escaping. This earthquake or volcanic eruption occurred probably about the year A. D. 1008. This city was about 22 kilometres north-northwest of the district office of New Chiengsen. The site of this ancient city is now a lake called Muang Lom (The Fallen City), and sometimes known as Muang Nong (The Lake City).

Another terrible earthquake is recorded in history as having occurred at Chiengmai and the surrounding territory, including Chiengsen, about A. D. 1545.

F. H. GILES.

Bangkok, July 26, 1931.

**No. II. Light Seen Over Oil-seep.**

In the Muang Fang district, southwest of Chiengrai, about the spot where the oil seepage is, during the season of jungle fires, the people say that, almost annually, they see a column of bluish-green light ascending to a great height from the ground. This column is not in the nature of a blaze.

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**No. III. Migration of Jungle-fowl.**

Between the middle of June and the end of July there has been a movement of jungle-fowl going on in Northern Siam, along the right bank of the Me Kong, from the Anglo-Siam frontier southwards to at least several kilometres south of Old Chiengsen. In the Chiengsen region the birds are apparently trying to cross the river eastwards, where it is about 700 yards across. In crossing, the birds fly up as high as they can go, and then attempt to glide across. A large number, however, fall in the river and are drowned. Last year at the same time a similar movement occurred along the river here.

About Me Sui, some four kilometres southwest of Chiengrai, the jungle-fowl are coming out into the open ground, in the vicinity of the district office. It is very unusual for these birds to come into the open in this way. The local people regard it as a portent of evil omen.

This movement does not seem to be caused by lack of food, as the birds are extraordinary plump and in good condition. It is not easy to understand why it is taking place, as the conditions on both sides of the Me Kong seem the same.

Since writing the above, my attention has been drawn to a similar movement in July and August of jungle-fowl taking place at Phrachoab Kirikhan, a province of the Monthon of Rajburi. Phrachoab Kirikhan is situated at k.m. 318 on the Southern Railway line, several hundred miles south of Chiengsen.

This movement of jungle-fowl which causes the birds to leave their forest home and come out into the open, and into villages, is so unusual that the people in the south hold equally with those in the north that it is a portent of evil omen.

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#### No. IV. Pla Buk (*Pangasius* sp.).

The fishing season for pla buk in the Me Kong in the vicinity of Chiengsen is from about the middle of May to the end of July. Two were caught at Chiengsen, one on the 11th and one on the 12th of July, opposite the Gendarmerie Station, but on the French side. The fish caught on the 12th was a female, in spawn. Her length was 87 inches, girth 50 inches. The roe alone weighed 88 pounds. The whole fish was not weighed. It was sold immediately it was caught, for 55 rupees (the equivalent of 44 ticals). The person who bought the fish then sold the roe for 60 rupees (48 ticals), and the remainder for 30 rupees (24 ticals), within half an hour of the fish being caught. The roe is considered a great delicacy.

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#### No. V. Additional Notes on Introduced Plants.

**Solidago polyglossa** DC. Golden-rod.

The *Solidago* mentioned in the previous number (*Nat. Hist. Suppl.*, viii, No. 3, p. 211), has since been kindly identified for me by Dr. E. D. Merrill as *Solidago polyglossa* DC. Dr. Merrill states that it is a species of wide distribution in South America.

**Tithonia diversifolia** DC. Mexican sunflower.

In 1902 Mrs. Collins imported seeds of this Mexican species from Java. Unlike the ordinary sunflower, this is a bushy perennial plant. It has now become established in several places in the Sriracha area, notably at Nawng Yai Bu. It is also in cultivation in many other parts of Siam, but does not seem to be spreading. It has been introduced in many other countries, and is recorded as