THE SALAGUBONG GONG, A FILIPINO INSECT TOY

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While staying in the hills above Dumaguete on the island of Negros in the Philippines we had the opportunity to see in operation a very interesting and ingenious mechanical toy made and operated by the native children.

The motive power is furnished by a good-sized melolonthid beetle somewhat larger, but quite similar to our North American species of *Phyllophaga*, and still more like the common European dor beetle, *Melolontha vulgaris*. The specimens used by the children belong to two species. Most of them were *Leucopholis pulverulentus* Burm. and one belongs to another somewhat closely related species, *Lepidiota punctum* Blanch. Doubtless any other similar, lubberly lamellicorn would serve equally well. Beetles of this type are abundant in the region, and in general, together with other large phyllophagous lamellicorns are known by the Visayan name, Salagubong. The "gong," as operated by the beetle is one of the five-gallon kerosene or gasoline tins which consistently carry the flavor of civilization everywhere into the furthest reaches of the tropics. We have seen these tins used for a multiplicity of purposes, and may now add still another which seems never to have been called to the attention of entomologists.

Aside from the beetle and the can, two plant materials are used in the construction of the gong: four thin sticks of bamboo, each about two feet in length, and three strands of tenacious fibre taken from the leaf-sheaths of the abaca plant, *Musa textilis*, which is grown extensively in the region for the commercial production of Manila hemp.

As shown in the accompanying illustration, two of the bamboo sticks are implanted in the ground and connected near their tops by a strand of fibre securely tied at each end, forming a miniature pair of football goal posts. The third stick is similarly fixed in the ground to form the apex of a triangle. One end of the fourth bamboo stick is now fastened to the transverse abaca fibre by a tight abaca loop, and suspended near

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its other end to the third stick by a fibre which allows it to move freely back and forth next to the vertical stick. The tin is placed near this vertical stick where it will be tapped by the horizontal stick as the latter swings on its longitudinal axis. Finally, the beetle is tied toward one side of the horizontal fibre by still another fibre which is short enough to keep the beetle off the ground. The base of the hind femora next to the coxae form a secure point to tie the beetle at the end of its abaca tether.

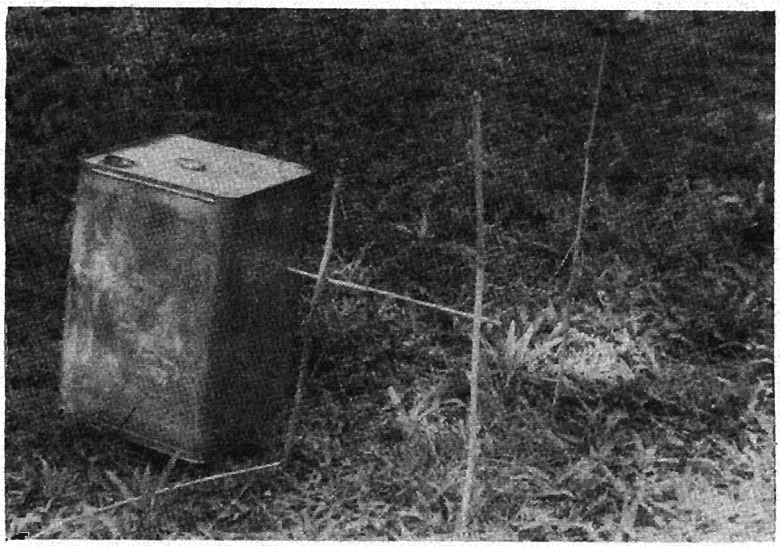

Fig. 1. The salagubong gong. The oil can which acts as a resonator is shown at the left. The first pair of bamboo sticks mentioned in the text are at the right, connected by the thread from which the beetle is suspended.

After a little teasing and manipulation, the beetle gets into action and attempts to fly away. As the abaca fibre grows taut, the path of motion assumes a circular orbit and the transverse fibre sways violently back and forth as the beetle circles unwillingly on its flying trapeze. The tin may now be shifted till it receives a staccato tap from the end of the stick at each revolution of the beetle. These taps strike the gong at the rate of two or three per second, dependent upon the muscular tonus of the

salagubong. Such taps are surprisingly loud and sufficiently strong to attract attention within a radius of 100 feet or more.

Each performance lasts half a minute or longer, till the beetle gives up the attempt to escape. After a short period of inactivity, further prodding readily induces an encore performance of similar duration.

THE EUROPEAN MANTIS (*Mantis religiosa* L.) IN NEW ENGLAND.—In view of the recent reports from Ontario (James, H. G., 1948, 79th Annu. Rept. Ent. Soc. Ont., 41-44) it seems pertinent to list the following New England records of this introduced insect: one ♀, Burlington, Vt., July 27, 1949; one ♀, Chester, Vt., Sept. 7, 1948 (Dr. C. T. Parsons); several specimens on summit of Mt. Mansfield, Vt., Aug., 1949 (Dr. E. A. Chapin); several at Cummington, Mass., Oct., 1949; one egg mass also at Cummington, Nov., 1949 (Dr. A. B. Gurney); one ♀, Melrose, Mass., Sept., 1949 (Dr. B. R. Lutz); one ♀, Watertown, Mass., Aug., 1949 (Mr. H. L. Starrett); one specimen, possibly from Conn., in Agr. Exp. Sta. Collection, no data. A number of specimens were also brought in from the Boston area during the 1949 season.

Dr. K. D. Roeder of Tufts College released specimens in Medford and Concord, Mass., in 1945, which seem to have been responsible for specimens taken in the same localities the following year. It remains for future winters to determine just how permanent this apparently wide establishment may be.—WILLIAM L. NUTTING, Biological Laboratories, Harvard University.