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Editors:
**Gilles Lessard and
Amy Chouinard**

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Bamboo Research in Asia



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The cover artwork, which has been reproduced throughout the book, is a line drawing based on a painting by Hui Nien, which has been used in several works on bamboo.



Bamboo Research in Asia

**Proceedings of a workshop held in Singapore,
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Forestry Research Organizations*

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The Angklung and Other West Javanese Bamboo Musical Instruments

Elizabeth A. Widjaja¹

Several bamboo musical instruments (especially the *angklung* and *calung*) are supposed to have originated in West Java, because one may still find them in the remote areas inhabited by primitive natives like the Baduy in South Banten. There are more than 20 kinds of bamboo musical instruments, but only a few of these are still widely used now. The species of bamboos used in musical instruments in West Java are *Schizostachyum blumei*, *Gigantochloa* aff. *atter*, and *G. apus*.

The importance of bamboo musical instruments in the life of Sundanese (namely the inhabitants of West Java) is self-evident from their widespread use and cultural function. Bamboo musical instruments have been in Java since before the Hinduism period; in Borobudur temple (built about 8th century), one can observe depictions of the *calung* and *gambang*. It is presumed that the development of bamboo musical instruments has a close relation to the Polynesian migration before the Christian era. The long history is one of the reasons that bamboo musical instruments like the *angklung*, *calung*, *suling*, and *celempung* are so well-developed and widespread, understandably, under different local names.

Some of them (especially the *angklung* and the *calung*) are supposed to have originated in West Java; one may still find them in remote areas inhabited by primitive natives (like the Baduy in South Banten of West Java). The Sundanese used bamboo as material for musical instruments in honour of Dewi Sri, goddess of rice and agriculture in Javanese mythology. The melodious sound produced by the graceful and slender and beautifully constructed instruments is believed to express appropriately the cheerful character of the Sundanese people.

In West Java there are more than 20 kinds of bamboo musical instruments. They can be divided into three groups according to the methods used in producing the sounds:

- Idiophones (grating or hammer instruments), which include the *angklung*, *calung*, *gambang*, *rengkong*, *karinding*, *goong*, *guyon bolon*, *gangsing*, *kunclung*, and *kohkohl*;
- Aerophones (aero instruments) which include the *hatong*, *suling*, *taleot*, and *kolecer*; and
- Chordophones (string instruments), exemplified by the *celempung*.

Only a few of these are still widely used now.

The *angklung* typically consists of two, three, or four separate bamboo

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segments, usually tuned to as many octaves. The upper parts of the segments have been partly removed to about half their lengths so as to form a sort of tongue, and they are closed at the bottom by a node. They are suspended vertically but capable of limited movement horizontally inside a bamboo frame. Their bottom ends are hampered in their movements by means of small protuberances, which can slide to and fro for a short distance inside a slit made in the bottom frame tube. The bamboo tubes produce sounds when the instrument is shaken. The sound is curiously bright. The air-column in the tubular part of the mobile bamboo segments produces, when being blown, the same tone-pitch as the entire segments when being shaken.

The *angklung*, as a musical bamboo, went through several changes of functions in conformity with the historical development of the country. Even today the South Banten Baduy people have a custom of shaking three or four *angklungs* at the finish of the work upon the *huma serang* or the sacred arable land. According to the folklore, the *angklung* was a musical instrument of agricultural festivals. It was also used during festivities and to arouse the fighting spirits of soldiers. Long predating the arrival of Westerners in Indonesia, it was suppressed by the Dutch because it could influence the soldiers to rebel against colonial power. In the 1920s it was a toy for children, and by the 1930s it was degraded as a crude instrument played by beggars to attract the attention of passers by. It was then that a local musician, Daeng Sutigna of Bandung, started his efforts to resurrect the *angklung* of West Java and to make it a respectable and popular musical instrument again. Tunes similar to Western music were introduced, modern arrangements made, and enthusiasts recruited. Now the *angklung* is a symbol of Sundanese music and occupies a position similar to that of the *gambang* for the Javanese *gamelan*. A complete set of traditional *angklung* consists of 18 pieces. The tunes they produce is the characteristic Sundanese da mi na ti la da, which is different from the Western do re mi fa so la ti do.

The *calung* is another instrument making use of bamboo tubes. Cut diagonally at one end like goose quills, the tubes are closed by a node at the other end. Use of the *calung* is limited to certain districts of the West Javanese province; formerly it was spread over a larger region. In South Banten it consists of 12-14 bamboo tubes (110), whereas in Bogor the *calung* consists of 18 bamboo tubes. According to Kunst (208), the *calung* generally is made up of 12, 14, or 16 tubes, tied together with cords, in a horizontal position like a rope ladder. From the top to the bottom of the instrument, the tubes get lower in pitch and increase in dimensions. When played, the *calung* is hung by its upper end on the wall of a house or a tree, the lower end being tied to the left knee of a sitting player or to the waist of a standing player. It produces sounds when beaten with two *penakols*, namely sickle-shaped wooden sticks of slightly different sizes.

The *gambang* basically is a Javanese musical instrument made of wood and probably can be considered as an Eastern counterpart to the Western piano. The Sundanese in recent years have developed a type of *gambang* that consists of a series of bamboo tubes tied horizontally together by cords on a bamboo platform. This *gambang bambu* is played in the same way as the *calung*. However, the *gambang bambu* is more sophisticated musically because it uses more bamboo tubes and, hence, has more tunes and pentaves. In North and South Celebes a similar bamboo musical instrument is also used but with different tunes.

The *rengkong* is a very rustic musical instrument consisting of only a long piece of bamboo tube. This bamboo is carried on the shoulder of a dancer and on

both its ends are suspended — held by string made of split bamboo — bushels of newly harvested rice. The *rengkong* is played usually during a ceremony to appease Dewi Sri when there has been a harvest failure. The rhythmic movement of the dancer's steps causes the suspended rice to swing, and the friction of the string against the bamboo produces the characteristic musical sound. This instrument is found in South Banten and in Sumedang in West Java, but one may also find it played in Pekalongan and Banyumas in Central Java.

The *kohkohl* is an instrument made up of a complete internode that has been slit longitudinally. Sound is produced when the side near the slit is beaten with a soft wooden stick. The size and length of the bamboo tube and the width of the slit determine the sound produced.

The *hatong* is a bamboo pan-pipe, which is usually played in pairs, namely a larger *hatong* with either two or three tubes and a smaller one with from 10 to 14 small tubes. In the district of Caringin in Banten, three different kinds of *hatong* are used during stag hunting: one with a single pipe bears the name *hatong ijen* or *hatong honghong* and is reserved for the leader; the two other kinds, i.e., the double-piped *hatong sekaran* and the three-piped *hatong pangayak*, are blown by the hunters themselves.

Other areas where the *hatong* can still be found are Flores, Timor, the eastern part of the central mountains, and the south coast of New Guinea. According to Kunst (208), the *hatong* is possibly derived from the Chinese name for a funeral trumpet *fa hatong*.

The *suling* is a bamboo transverse flute. The Sundanese recognize the *suling pelog*, which has six stops or holes, the *suling salendro* with four stops, and the *suling degung*, also with four stops but with the second stop from the top invariably much larger than the three others so that the instrument gives the characteristic *degung* scale. In South Banten there exist at least four other different flute forms, namely, the *bangsing* with seven finger holes; the *suling lintang* with two stops; the *calintu*, the mouthpiece of which is formed simply by a notch in the wall of the tube, with five stops; and the *elet*, which is a slit-stopped flute with four, five, or six stops. The bamboo flute is common all over Indonesia.

The *taleot* or *susurilitan* is a small bamboo whistle. Formerly used as a horn by the drivers of horsecarts in certain Sundanese areas, it is now very rarely seen.

The *kolecer* is actually a weathercock, namely propellers attached to a horizontally poised bamboo tube of various sizes. When the wind blows, a sound is produced the tune of which depends on the length and size of the bamboo tubes. By putting out many weathercocks with different sizes of bamboo tubes, one can produce melodious music.

The *celempung* is the name given by the Sundanese to the bamboo stringed instrument. It consists of a complete internode closed at both ends by the nodes, provided with a longitudinal slit and two bamboo strings cleverly split from the slit. This instrument is widely distributed and can be found from Madagascar, Vietnam, Malaya, and all over Indonesia to the Tasadays in the Mindanao of the Philippines. Each area normally has a characteristic number of strings, varying from one to four.

Species of Bamboos Used in Musical Instruments

In enumerating the various kinds of uses of Indonesian economic plants, Heyne (147) only mentioned that *Schizostachyum blumei* Nees was used in the *suling* in many places. Kunst (208) recorded *bambu tutul* as the kind of bamboo

used in the *angklung* in West Java. Field observations have indicated that in recent years *bambu tutul* — or the spotted bamboo, a cultivar of *Bambusa vulgaris* Schrad. — has been used only rarely in the *angklung* and other musical instruments. Thus, despite the widespread use of bamboos in many types of musical instrument, the identities of the species employed have not been established scientifically.

As was reported previously (463), the majority of Sundanese bamboo musical instruments have been exclusively made of *bambu hitam*, a species of bamboo tentatively referred to as *Gigantochloa* aff. *atter* (Hassk.) Kurz ex Munro. The leaf anatomy of this taxon is distinct from that of the true *Gigantochloa atter* (Hassk.) Kurz ex Munro or *bambu temen*, but its floral characters are unknown. Therefore, its taxonomic status has not been satisfactorily decided. The *bambu temen* itself is also used in musical instruments but not as extensively as the much preferred *bambu hitam*.

Occasionally a third species, the *bambu apus* or *Gigantochloa apus* Bl. ex Schultes f., is also employed in low-quality musical instruments, because this bamboo is more readily available than is *bambu hitam*. However, musical authorities and musical-instrument makers agree that this species is unsuitable for musical instruments because its tubes are not straight. There are little swellings near the nodes that apparently cause some disturbance in the sound it produces.

Also, the *bambu hitam* from West Java is considered more suitable and is much preferred to the *bambu hitam* from Central and East Java because the latter tends to have tubes with larger diameters and thicker walls.

Discussion

In recent years, the number of people becoming interested in bamboo musical instruments has been increasing. There are many musical groups in schools, government institutions, and professional societies that have a set of bamboo instruments at their disposal. Tourists from abroad also like to have real or toy bamboo musical instruments to take home. Nowadays, a complete set of bamboo musical instruments may be obtained for about U.S. \$250.

The increasing demands for these musical instruments have not been balanced by the availability of raw materials required for making them. There is a shortage of good and appropriate bamboo for musical instruments largely because of the demand for West Javanese *bambu hitam* from the furniture and handicraft industry. Also, bamboo groves and plantations are disappearing because of the pressure for food crops on the land they occupy.

The price of bamboo suitable for musical instruments is affected by this competition. The cheaper and more readily available *bambu apus* (*Gigantochloa apus*) is being used but is unsuitable for good-quality musical instruments. Therefore appropriate steps should be taken to ensure that suitable *bambu hitam* will always be available for the West Javanese bamboo musical instrument industry.

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