

## THE RANAT AND BONG-LANG: THE QUESTION OF ORIGIN OF THE THAI XYLOPHONES

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In the early 1970's a musical instrument known as the *bong-lang* from Galasin (Kalasin) province in the northeast region of Thailand was discovered by scholars in Bangkok. The *bong-lang* is a vertical xylophone, i.e., a succession of struck hardwood logs each with its own pitch. Some Thai scholars asserted that the *bong-lang* was the long-sought ancestor of the horizontal xylophone (*ranat*) found in central Thai classical ensembles. Because Galasin province was isolated due to poor roads until about 1970 and is a culturally conservative area, the theory seemed plausible.

Although we were skeptical of a direct relationship between the *bong-lang* and *ranat*, in 1973 we began investigating the origin and lore of the *bong-lang*. Interviews were conducted in Ban Na-jan (Pai subdistrict, Müang district) in Galasin province, the center of *bong-lang* activity, both with musicians and the eldest people who could be found. Additional information was gleaned from interviews elsewhere in the region. While not claiming to have found the indisputable truth regarding the relationship between the two xylophones, we feel the following suggests several conclusions, some of them more probable than others.

The modern *bong-lang* consists of twelve round hardwood logs which are strung from a post or tree trunk by a loop of heavy cord which passes through the logs on each side from top to bottom. Knots in the cord maintain a small space between each log. Originally, however, the cord was wrapped around the logs. The cord loop at the bottom may be secured to a peg driven into the ground or around the player's ankle. The largest log, some ten centimeters in diameter and sixty centimeters long, is at the top; each log below is slightly shorter and smaller in diameter. A flat playing surface is provided by shaving away the rounded face across the middle of each log. The instrument may be played by one player using two wooden beaters or with the addition of a second performer playing one or two drones; they may be seated or in squatting position.

Although the actual pitch of the deepest log (highest in position) varies, we have chosen to call it E to avoid sharps and flats. The pitches are arranged in a continuous pentatonic system: E, G, A, c, d, e, g, a, c', d', e', g'. The pitches and intervals approximate those of Western tuning, though this stems from the tuning of the Lao mouth organ (*kaen*) rather than outside influence.

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This tuning system not only corresponds to that of the *kaen* (though the *kaen* has seven pitches in an octave), but is capable therefore of playing both of the basic Lao scales: *sun* (pitches, G, A, C, D, E,) and *yao* (pitches, A, C, D, E, G).<sup>1</sup> When playing the *sun* scale, a second player would beat the second and seventh logs (G and g) while in the *yao* scale he would beat the third and sixth logs (A and e). Thus *bong-lang* pieces may have a kind of drone harmony.

Although the *bong-lang* could be played as a solo instrument, when first discovered it was part of a local ensemble organized by a forestry official in Galasin province who combined *bong-lang* with *pin* (plucked lute) and a *kaen wong* (ensemble of free-reed mouth organs). This troupe, which performed traditional pieces, was invited to perform at the Siam Society in Bangkok in 1972 resulting in much publicity in newspapers and interest by scholars. By 1973 45 r.p.m. recordings began appearing featuring the *bong-lang* in ensembles mixing traditional northeastern instruments with those more commonly found in combos, while singers crooned *pleng-look-toong* (popular songs based on traditional styles). In the later 1970's there was revived interest in the *bong-lang* because the soundtrack for the movie *Kroo Ban Nawk* (The Teacher from a Distant Village) featured northeastern music played by *kaen*, *pin*, *saw* (fiddle), and *bong-lang*. Northeastern music was probably chosen for this because at that time a popular group called Kanah Pet-pin-tawng had been playing many northeastern *pleng-look-toong*, though without the *bong-lang*.

While solo *bong-lang* pieces have their own descriptive titles, the instrument lacks an independent repertory and mostly copies the music of the well-established *kaen*. Among the titles encountered were:

1. "Sootsanaen," referring to one of the three *kaen* modes that follow the *sun* scale.
2. "Pootai la-dup," referring to the highland Pootai living in Galasin and other provinces, a piece using the *yao* scale; *la-dup* means "to walk around a festival tent."
3. "Döi hua non dan," played in the *sun* scale, imitates a type of singing popular among both *mawlum glawn* singers and *mawlum moo* troupes (non-dramatic and dramatic genres, respectively).
4. "Lum plün," imitating another theatrical genre of the same name, in the *yao* scale.
5. "Döi düan hah," a title sometimes encountered among *kaen* players referring to the fifth month of the Thai calendar, approximately April, an important month for shamans but as a musical title having no technical meaning.

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1. See Terry E. Miller and Jarernchai Chonpairot, "The Musical Traditions of Northeast Thailand," *Journal of the Siam Society* 67-1 (January, 1979): 1-16.

6. "Manoh gao chun," which has no literal meaning (*manoh* is heart or mind ; *gao* is nine, and *chun* or *sun* in Lao means floor, level, variation, or tempo) but is played in the *sun* scale as a kind of multi-sectioned *sootsanaen*.
7. "Bong dai mai" (the caterpillar crawls in a branch of the tree), scale unknown.
8. "Mae hang glawm look" (the widow sings a lullaby to her child), played in the *yao* scale.
9. "Nok sai kuam tong" (the sai bird flies across the field), played in the *yao* scale.
10. "Bong-lang," a title that requires further explanation.

The term *bong-lang*, in fact, refers to a medium-sized bronze bell mounted in a semi-oval wood frame, seemingly, a free-standing hanging bell. A lead cow (not a buffalo) wears a cloth sling over its back with baskets hanging from either side, and the *bong-lang* bell is placed in the middle of the back. To keep it from falling, pieces of rope secure the wood frame (around extensions of the base) around the cow. The bell's proper name would be *mak-bong-lang*, and it sounds when struck with a beater. An excellent illustration of the *bong-lang* is found in Curt Sachs' *Die Musikinstrumente Birmas und Assams*, although this specimen comes from the Shan States in upper Burma.<sup>2</sup> In any case, the *bong-lang* bell is unrelated to the *bong-lang* xylophone except that a favorite and characteristic piece imitating the bell's sound is closely associated with it. What, then, is the instrument's proper name ?

According to informants, the proper name of the instrument is *kaw-law*. The derivation of the term warrants consideration in some detail. The term *kaw* in Lao means a wooden (or rarely a metal) object with a crook at the end, that is, "hook-shaped" or "clasping." In central Thai the same concept is expressed in *dakaw*. The significance of the term is obscure, except that the *kaw-law* is hung by a rope on a tree.

The term *kaw-law* normally connotes a village headman's signal box made of either a solid log or more commonly a section of bamboo with the nodes at either end intact and a slit cut down one side—technically, a slit gong. To signal the village of a meeting or some other matter, the headman strikes the *kaw-law* with a beater.

Wooden and bamboo slit gongs are commonly found in many areas of the world, especially insular Southeast Asia, the Pacific islands, and Africa. It is interesting to note that the central Thai equivalent of the *kaw-law* is called *graw*, though the bamboo slit-gong found along the border of Thailand and Malaysia is called *kalah* in Malay

2. Curt Sachs, *Die Musikinstrumente Birmas und Assams im K. Ethnographischen Museum zu München* (München : Verlag der Königlichen Bayerischen Akademie der Wissenschaften, 1917), Tafel 6.

according to Balfour<sup>3</sup> and called *kol-kola* in the Kisser dialect according to Sachs.<sup>4</sup> Sachs also described an unnamed Burmese wooden slit-gong which is held in one hand and struck by a stick held in the other.<sup>5</sup> Insular slit-gongs have been described in Sumatra by Marsden,<sup>6</sup> in Java by Kunst,<sup>7</sup> and in the Celebes by Kaudern.<sup>8</sup>

The Lao term *kaw* also refers generically to cow bells, such as the *kaw-mak-galong*, a wood or bamboo tube with a heavy cord running through it and around a female buffalo's neck; on the cord inside the tube are pieces of wood which jingle when the animal walks. Dhanit Yupho writes that in central Thailand a similar bell using a slit-gong tube is called *bong-lang*,<sup>9</sup> though this term in the northeast refers, as we have said, to a metal bell. It may be added that the term *bong* refers to wooden bells in the usual vertical position; a large *kaw-law* signal in bell shape would be a *bong*. The connection with the *kaw-law* instrument has to do with the village headman's signal box, for in a sense the *kaw-law* instrument is a series of *kaw-law* signal gongs, though not the slit type. Although most signal *kaw-law* are of bamboo while the instrument is solid wood, the signal box is sometimes wood as well.

In trying to determine the *kaw-law*'s origin, history and relationship with the *ranat* xylophone of central Thailand, a variety of informants were interviewed, many of whom gave contradictory answers. The instrument seems to have been relatively unknown outside Müang district, Galasin province, until recently. Mr. Tawng-si Hawirot, age 71 (1974) of Ban Jaeng (Müang Lat subdistrict, Müang district) in Roi-et province just south of Galasin city, said that the *kaw-law* only became known to him about 1969 when a man from Pon-tawng village in Müang district, Galasin province, came to Ban Jaeng playing a *kaw-law* with seven logs. He assumed at the time that it was a newly invented instrument since he had not seen it before.

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3. Henry Balfour, "Report on a Collection of Musical Instruments from the Siamese Malay States and Perak," in *Fasciculi Malayenses*, ed. Nelson Annandale and Herbert C. Robinson, (Part II (a), *Anthropology*) (Liverpool: University Press of Liverpool, 1904), p. 3.
  4. Curt Sachs, *Die Musikinstrumente Indiens und Indonesiens*, 2nd ed. (Berlin: Vereinigung Wissenschaftlicher Verleger, Walter de Gruyter und Co., 1921), p. 23.
  5. Curt Sachs, *Birmas und Assams*, p. 9 and Abb. 5.
  6. William Marsden, *The History of Sumatra*, 3rd ed. (London: the author, 1811; reprint ed., Kuala Lumpur: Oxford University Press, 1966), p. 195.
  7. Jaap Kunst, *Music in Java*, 3rd ed. edited by E. L. Heins, 2 vols. (The Hague: Martinus Nijhoff, 1973), 1: 192-3.
  8. Walter Kaudern, *Musical Instruments in Celebes, Ethnographical Studies in Celebes*, vol. III (The Hague: Martinus Nijhoff, 1927), p. 70.
  9. Dhanit Yupho, *Thai Musical Instruments*, 2nd ed. trans. David Morton (Bangkok: The Department of Fine Arts, 1971), p. 8.

The oldest informant in Ban Na-jan (Galasin province), a ninety-eight year old lady (1974), could not recall any such instrument when she was young, though it must be admitted she seemed to have great difficulty responding to our questions because of her deteriorating mental condition. An eighty-one year old monk, Pra Doo, said that he saw a *kaw-law* as early as 1904 which had between twelve and fourteen logs. They were kept in the huts in the rice fields (*ban-nah*) and played to fend off wild tigers and elephants (animals now extinct in the northeast except where the latter are domesticated). He added that by this time the central Thai ensembles were known there because they had come to play for a governor who was not of local birth. (Could it be that the *kaw-law* was influenced by the *ranat* as early as 1904?)

Mr. Pao Gao-sa-at, age 75 (1974) who was born in Selapoom district, Roi-et province, said that he first saw the *kaw-law* when he was about seventeen (c. 1915) in Jadoo-puk-piman district in southern Roi-et province. Lastly a *kaw-law* player from Ban Na-jan said that they were being played solo in field huts when he was young (c. 1936) and had seven to nine logs. He added that many villages had them, that they were played for pleasure, but he thought they were restricted to Müang district, Kalasin province.

It must be concluded that the *kaw-law*'s existence as a musical instrument cannot be documented beyond the turn of this century and that it was virtually unknown outside Müang district, Galasin province, until recent years. The development of its repertory has been slow, and most pieces are derived from the repertories of more established instruments.

The central Thai xylophone (*ranat*) presently exists in two types, the higher pitched *ranat-ek* which is the older form, and the lower pitched *ranat-toom* which was designed during the reign of Rama III (1824-1854).<sup>10</sup> The *ranat-ek* consists of twenty-one hardwood (or less commonly thick bamboo) keys suspended with two cords running through holes in each key over a curved, trough-shaped wooden resonator. The resonator is raised on a small square base. The pieces at each end of the resonator are carved into an abstract mask form called *kon*.<sup>11</sup> The player strikes the keys with two mallets whose heads are thick discs covered with thread. The function of the *ranat* in both *beepat* and *mahori* ensembles is to play an active and leading version of the melody, usually in octaves, but sometimes in thirds, fourths, or fifths. The *ranat-toom*, whose seventeen or eighteen keys are larger and thus play a deeper pitch, are struck with larger mallets. The function of this instrument is to play an accompanying and often syncopated version of the melody. The tuning of both is the relatively equidistant seven tones of the central Thai tuning system.

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10. Ibid., p. 15.

11. Ibid., p. 13.

Neither Dhanit nor Morton offer histories of this instrument since documentation is simply lacking. Our examination of early descriptions of Thailand by Europeans has yielded many mentions and even lists of instruments used at Ayutia in the seventeenth and to some extent in the early eighteenth centuries. None of the writers who go into some detail about Thai music, such as Nicolas Gervaise (1688), Simon de La Loubere (1693), or François Henri Turpin (1771), mention a xylophone, though they describe a great number of other instruments including the *kawng-wong*. An illustration in a hand-made book dated c. 1730 which survived the destruction of Ayutia in 1767 (pictured in David Morton's book)<sup>12</sup> showing a *ranat* is problematic in that the instruments appear virtually in their modern forms and combinations. The presence of the xylophone, ignored by Turpin forty years later, casts doubt on the accuracy of the c. 1730 date.

The earliest definite description of the *ranat* that we have found is from George Finlayson's 1826 account of his travels to Siam and Cochin China five years earlier. He says:

The tones of this instrument [*kawng-wong*] are very pleasing. It is usually accompanied by the instrument called ran-nan; this is formed of flat bars of wood, about a foot in length, and an inch in breadth, placed by the side of each other, and disposed so as to form an arch, the convexity of which is downwards. Both this and the last-mentioned instrument are struck with a light piece of wood, or a small mallet.<sup>13</sup>

Later descriptions rarely fail to mention the *ranat* by name. These include John Crawford's 1828 journal,<sup>14</sup> Edmund Robert's 1837 description,<sup>15</sup> Frederick Arthur Neale's 1852 *Narrative*,<sup>16</sup> and Mgr. Pallegoix's 1854 description.<sup>17</sup> We are forced to conclude on the basis of documentation that the *ranat* appeared during the early Bangkok period unless the dating of the aforementioned book from Ayutia is correct.

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12. David Morton, *The Traditional Music of Thailand* (Berkeley: University of California Press, 1976), frontispiece.

13. George Finlayson, *The Mission to Siam and Hue the Capital of Cochin China in the Years 1821-2*. (London: John Murray, 1826), p. 191-2.

14. John Crawford, *Journal of an Embassy from the Governor-General of India to the Courts of Siam and Cochin China* (London: Henry Colburn, 1828; reprint ed. Kuala Lumpur: Oxford University Press, 1967), p. 333.

15. Edmund Roberts, *Embassy to the Eastern Courts of Cochin-China, Siam, and Muscat* (New York: Harper and Brothers, 1837), p. 238.

16. Frederick Arthur Neale, *Narrative of a Residence in Siam* (London: Offices of the National Illustrated Library, 1852), p. 236.

17. Mgr. Pallegoix, *Description du Royaume Thai ou Siam*, 2 vols. (Paris, 1854), 1: 345.

The etymology of the word *ranat* remains uncertain in spite of the best efforts of Dhanit Yupho and ourselves. Dhanit asserts that the term *rat* in the old phrase *beepat-rat-dapon* means the *beepat* ensemble, the xylophone, and the *dapon* drum, because *rat* may mean "to spread out or expand in an orderly series."<sup>18</sup> He also states that the term *rang* refers to the entire instrument, *rang* having among its meanings "trough." The step from *rat* to *ranat* can be explained perhaps by the habit of altering Thai words to Cambodian style by dividing them into two syllables, this sounding more prestigious. The term *ranat* also appears in the Thai idiom, "lom raneh ranat" meaning "to fall down all over the place."

Prince Souvanna Phouma, former Prime Minister of Laos, has written that this same instrument in Laos is called *nang-nat* or *rang-nat* where it was adopted by the court.<sup>19</sup> It is common for Southeast Asian instruments to have animal shapes, both realistic and abstract, such as the Thai *jakeh* being in crocodile form. The Mon *kawng-wong* instrument has a *kinnery*—half bird, half female—figure on it. The *ranat* may be in abstract serpent form (*naga*) which could be *nang-nak* (serpent lady), easily corrupted to *nang-nat* (which means "dancing girl"), which could be further altered to *rang-nat* ("trough serpent") and perhaps even shortened to *ranat*. The Lao typically preserve older forms of the language and seem to have preserved an earlier name for the xylophone. We agree ultimately with Dhanit, however: "linguistic experts have not as yet reached an agreement as to which was the original use of the word."<sup>20</sup>

Any attempt to discover relationships among instruments in Southeast Asia must be preceded by the classifying of the instruments lest mistaken assumptions be made. For example, the forms of the *kaw-law* and *ranat-ek* are fundamentally different, though both are xylophones in the larger sense. Although a book has been written examining xylophones in Asia and Africa and purporting to show a direct connection,<sup>21</sup> that author's descriptions of Southeast Asian xylophones are incomplete. Therefore we find it necessary to offer our own classification of xylophone types including brief description and discussion of their diffusion.

Type I	Leg xylophone
Type II	Log xylophone
Type III-A	Vertical xylophone with wooden keys

18. Dhanit Yupho, *Thai Musical Instruments*, p. 14.

19. Prince Souvanna Phouma, "Music," in *Kingdom of Laos*, ed. René de Berval, trans. Mrs. Teissier du Cros et. al. (Saigon: France-Asie, 1959), p. 88.

20. Dhanit Yupho, *Thai Musical Instruments*, p. 14.

21. A.M. Jones, *Africa and Indonesia: The Evidence of the Xylophone and other Musical and Cultural Factors*, 2nd ed. (Leiden: E.J. Brill, 1971).

- Type III-B Vertical xylophone with bamboo keys
- Type IV-A Horizontal xylophone with wood keys on flat frame
- Type IV-B Horizontal xylophone with bamboo keys on flat frame
- Type IV-C Horizontal xylophone with suspended wooden keys
- Type IV-D Horizontal xylophone with suspended bamboo keys
- Type V Oblique xylophone

Relative to Thailand, the *ranat* represents Type IV-C (and when the keys are of bamboo, Type IV-D) while the *kaw-law* represents Type III-A. To the best of our knowledge, all types are found in both mainland and insular regions of Southeast Asia except Type I, Type IV-B, and Type V which are found only in Insular Southeast Asia while Type IV-C is found only on the mainland.

### Leg Xylophone

The leg xylophone (Type I) would appear to be the most basic form since one merely strikes with a beater several bars of wood or bamboo placed across the thighs. For a resonant sound xylophone bars must be supported (on the legs, pieces of wood, or from cords) about 2/9 of the way in at each end; this is where the two nodes occur.<sup>22</sup> Leg xylophones are widely distributed in Insular Southeast Asia.

1. Nias Island and Mentawai Islands, Indonesia. Kunst describes three- and four-keyed instruments from Nias called *doli-doli*, and two-, three-, and four-keyed instruments from the Mentawai Islands called *tundakut*, *tutukat*, or *telega*.<sup>23</sup>
2. Celebes. Kaudern describes a three-keyed instrument from among the Toala in the south Celebes.<sup>24</sup>
3. Borneo. Hose and Macdougall describe a thigh xylophone played with two beaters from among the Punan of central Borneo.<sup>25</sup>
4. Papua, New Guinea. Kunst documents a two-keyed instrument played with two beaters.<sup>26</sup>
5. Philippines. Pfeiffer mentions the *patatag* leg xylophone from Luzon.<sup>27</sup>

22. Ibid., p. 125.

23. Jaap Kunst, "Music in Nias," *Internationales Archiv für Ethnographie* 38 (1939) : 22-3.

24. Kaudern, *Musical Instruments of Celebes*, p. 69-70.

25. Charles Hose and William Macdougall, *The Pagan Tribes of Borneo*, 2 vols. (London : Macmillan and Co., 1912; reprint ed. London : Frank Cass and Co. Ltd., 1966), 2 : 192.

26. Jaap Kunst, *Music in New Guinea*, trans. Jeune Scott-Kemball (The Hague : Martinus Nijhoff, 1967), p. 41.

27. William R. Pfeiffer, *Filipino Music* (Dumaguete City, The Philippines : Silliman Music Foundation, 1976), p. 42-3.

### Log Xylophone

A log xylophone (Type II) is distinguished from the leg xylophone by its placement of the keys on two parallel or oblique logs or pieces of wood resting on the ground. Our search has thus far yielded examples from only two regions, the Indonesian islands and eastern Burma.

1. Insular Indonesia. Kunst mentions log xylophones on parallel supports from the Mentawai Islands (called *telega*), W. Madura (*galundang*), Sumbawa or Birwa (*katongga kayu*), Flores (specifically, Endê) (*gèko*), Lio (*lètör*), E. Flores (*prèson*) central Timor (*sénéhau*), Tanimbar and north Celebes.<sup>28</sup> Kaudern similarly describes and illustrates a five-keyed example from Bwool in the north Celebes.<sup>29</sup>
2. Burma. Marshall illustrates and describes eleven-tubed bamboo ground xylophones on oblique supports. One end of each tube is closed by a node while the other is open and cut at an angle like the end of a quill pen. People set up this simple instrument, called *paw ku*, along a road while resting during travel and abandon it when moving on. It is played with two bamboo beaters while one or two longer bass pipes are beaten separately.<sup>30</sup>

### Vertical Xylophones

Neither the leg nor the log xylophones appear to have any direct relationships with the *kaw-law* or *ranat*. It is the vertical xylophone (Type III) which is of interest in determining the significance of the *kaw-law*. Vertical xylophones with wooden keys (Type III-A) occur much less frequently than those with bamboo keys (Type III-B). Even so, the wood variety is found in upland Vietnam, Malaysia, and the Philippines.

1. Vietnam. Northwest of Dalat live the Mnong-gar people, an upland Mon-Khmer speaking group who play a vertical log xylophone called *tling tlör*. According to Condominas :

*Tling tlör* : a xylophone played in the fields. It is made of four horizontal bars hung by two rattan strings to a fifth bar, which, in turn, is attached to an upright support. The two other ends of the rattan strings are fastened to the ground by stakes. The bars of this musical "ladder" are struck by two players, one using two hammers, the other only one.<sup>31</sup>

28. Kunst, "Music in Nias," p. 23.

29. Kaudern, *Musical Instruments of Celebes*, p. 70.

30. The Rev. Harry Ignatius Marshall, *The Karen People of Burma* (Columbus, Ohio : The Ohio State University, 1922), pp. 164-5.

31. Georges Condominas. *We Have Eaten of the Forest*, trans. Adrienne Foulke (New York : Hill and Wang, 1977), p. 370. See also G. Condominas, "Le lithophone préhistorique de Ndut Lieng Krak," *Bulletin de l'Ecole Française d' Extrême-Orient* 45-2 (1951) : 372.

Its use in the fields and being played by two persons interestingly relates it to the *kaw-law*'s original function in field huts and manner of playing.

2. Malaysia. Sheppard describes only briefly two little-used vertical xylophones, one called *kertok-kertok* consisting of seven softwood logs two feet long hung in a frame and one called *kertok-buloh* which is identical except the logs are replaced by bamboo. Both appear to be slit gong types.<sup>32</sup>
3. Philippines. Maceda apparently never saw but heard about a nearly obsolete instrument among the Magindanao called *luntang* which consists of five or eight logs in graduated lengths suspended horizontally one above the other on a cord which is attached to a house or branches of a tree. "Here, one person plays the melody on the sharpened ends of the logs while another plays a rhythmic drone on the middle section of one log."<sup>33</sup>
4. Perhaps least significant but intriguing nonetheless is an illustration in Filippo Bonanni's 1723 *Gabinetto armonico* of a "Zilorgano" which is a tiny vertical xylophone of seven round wooden keys, largest on the bottom, played with a single mallet.<sup>34</sup>

Vertical xylophones with bamboo keys (Type III-B) are found primarily in three regions: upland Vietnam, Borneo, and Java. Those found in the mountains of southern Vietnam among the upland Mon-Khmer and upland Cham are most common. Although there are no comprehensive studies of hill-tribe instruments and no way of knowing at this time how many other ethnic groups have vertical xylophones, the group furthest north having one is the Sedang found north of Kontum. The Sedang instrument, called *kling-klang*, consists of eleven bamboo tubes with the largest at the top bound together with a cord which passes around each tube, the upper loop being fastened to a tree or building. The tubes consist of pieces of bamboo with one end closed by a node and the other end open; there is furthermore a slit in the tube about  $\frac{2}{3}$  its length extending from the open end. Adjacent pipes are reversed by alternating closed with open end tubes. Gironcourt, the writer who pictures this instrument, says that it produces a pentatonic scale, is struck with two wooden beaters, and can be played in fifths.<sup>35</sup> In the same vicinity and even into southern Laos itself, the Jeh

32. Mubin Sheppard, *Taman Indera* (Kuala Lumpur: Oxford University Press, 1972), p. 53.

33. José Maceda, "The Music of the Magindanao in the Philippines," Ph.D. Dissertation, University of California at Los Angeles, 1963, p. 151.

34. Filippo Bonanni, *Gabinetto armonico* (Rome, 1723; reprinted as *The Showcase of Musical Instruments*, ed. Frank Ll. Harrison and Joan Rimmer, New York: Dover Publications, 1964), figure 98.

35. Georges de Gironcourt "Recherches de géographie musicale en Indochine," *Bulletin de la Société des Etudes Indochinoises*, n.s. 17-4 (1942): 46, 52.

people also play such an instrument, a xylophone with ten tubes played with two wooden beaters.<sup>36</sup>

South of Kontum and extending to Ankhe near the coast, the Bahnar people, also Mon-Khmer, play a similar instrument called *kleng-kong* or *deng*. The name of this instrument, like most of the vertical xylophones among upland peoples, appears to be onomatopoeic.<sup>37</sup> Two upland Cham groups on the Darlac Plateau of Vietnam north of Ban Me Thuot, the Jarai and Rhade, use vertical xylophones. While the name of the Rhade instrument is unknown, that of the Jarai is *trüng* which according to Dournes has eleven tubes and is played with two beaters.<sup>38</sup> Like the Sedang instrument shown in detail by Gironcourt, the Jarai instrument places the longest (in pitch, deepest) tubes at the top like the *kaw-law*. According to Dournes' photo, the cord is wrapped around each tube and the upper loop is fastened to a building while the lower loop goes around the player's ankle. The tubes are also closed at one end and open at the other, with a slit at the open end; further, the tubes again alternate—open, closed. This instrument, which is played with two beaters, is exclusively a solo instrument played especially for pleasure in small buildings in the rice fields. Dournes gives the Jarai name of each tube, but does not indicate the musical pitches.

It is well known that many cultural relationships exist between the mainland and the island of Borneo; therefore, it is not surprising that vertical xylophones virtually identical to those of the Vietnamese highlands also turn up there, though there is as yet only limited documentation. Owen Rutter quotes W.J. Worth's description of Murut instruments from north Borneo including that of the *bakakong*, a bamboo xylophone whose exact number of tubes is uncertain. The player is shown standing with the lower loop around his thigh. Says Worth, "The native who performed on this instrument used both sticks at each stroke, producing a two-part harmony by no means discordant."<sup>39</sup> An even less detailed description of such an instrument among the Dusun by Ivor H.N. Evans tells us: "Another favorite instrument is a wooden dulcimer or xylophone. By travellers in the hill districts the sound of one of these instruments is frequently to be heard, coming, as a rule, from some *sulap* (small hut) in which a family is living in order to guard their padi crop from marauding beasts and birds."<sup>40</sup>

36. Jean-Dominique Lajoux, *Le tambour du déluge : Villages des montagnes d'Indochine* (Paris : Seuil, 1977), p. 28.

37. Jacques Dournes, "La musique chez les Jörai," *Objets et Mondes* 5-4 (Hiver, 1965) : 240.

38. *Ibid.*, p. 215 and 241.

39. Quoted in Owen Rutter, *The Pagans of North Borneo* (London : Hutchinson and Co., 1929), p. 112.

40. Ivor H.N. Evans, *Among Primitive Peoples in Borneo* (London : Seeley, Service, and Co., 1922), pp. 32-3.

In the Indonesian archipelago vertical bamboo xylophones are widely distributed. Because xylophones are shown in bas reliefs from various early temples, however, we know much more about the early history of the xylophone in this region, including the horizontal version which later became the *gambang* of the modern *gamelan* ensembles. The earliest illustration is found at Barabudur (824 A.D.) in Java in a bas relief depicting what appears to be a ten-keyed xylophone played horizontally but from one end, beaten with two beaters—in short, a cross between the vertical and horizontal xylophones. Horizontal xylophones played with two pairs of beaters (two in each hand) are found in a 1375 relief at Candi Panataran.<sup>41</sup>

The vertical bamboo xylophone in modern-day Indonesia, specifically Java, is called by various names, the oldest being *calung* (also spelled *chalung* and *tjalung*). References to it are found in documents dating back to 1181 and 1204.<sup>42</sup> Kunst pictures two *calung* from Sunda (western Java) having twelve and fourteen bamboo tubes respectively.<sup>43</sup> Fig. 112 indicates that the largest of the tubes, whose left ends are closed by the node and whose right ends are cut like a quill pen, are in the upper position and that the lower end is attached somehow to the floor or leg of the player, Kunst's *Music in Java*, however, pictures a *calung* whose tubes are arranged similarly except that the smallest tube is at the top where the cord attaches to a tree while the lower end with the large tubes is fastened around the standing player's waist.<sup>44</sup> In all cases the instrument is played with two spoon-shaped wooden beaters. Besides being found in Sunda and the Regency of Panaraga in eastern Java, such instruments are also found in the Batak country of north central Sumatra (called *garantung*), the island of Nias off the Sumatran coast (*doli-doli*), the island of Ambon (part of Ceram) (called *tatabuhan kayu*), and on Flores.<sup>45</sup>

Intriguing is the possible relationship between the *calung* and the *angklung*, the shaken idiophones which are played by a group in bell-choir fashion. The *angklung* consists of three bamboo tubes cut similarly to those of the *calung* (though the cut-away section is proportionally longer) and placed in a light bamboo frame so as to be shaken. The middle tube is one octave lower than the smallest and an octave higher than the largest tube.

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41. Jaap Kunst, *Hindu-Javanese Musical Instruments*, 2nd rev. ed. (The Hague : Martinus Nijhoff, 1968), fig. 60.

42. *Ibid.*, p. 71.

43. *Ibid.*, fig. 112-113.

44. Kunst, *Music in Java*, fig. 137.

45. Kunst, *Hindu-Javanese Musical Instruments*, p. 72.

### Horizontal Xylophones

Horizontal xylophones (Type IV) have been subdivided into those whose keys rest on the resonator and those whose keys are suspended on cords with the further, though less significant, differentiation of bamboo and wooden keys. The suspended xylophone is primarily a mainland instrument while the flat-keyed instrument is primarily found in India and the insular region.

The subject of Indian xylophones is problematic because very few sources describe or illustrate them, and few of these appear to be the result of actual field work. An Indian source describes a suspended xylophone called *kashī-tarang* which looks very much like a crude Burmese *pattala*; its provenance is not given.<sup>46</sup> Two European writers, Fétis and Courant, describe a flat xylophone called *kinnery* said to be from the Madras area which has seventeen bars of either metal or ironwood.<sup>47</sup> Fétis adds that the two beaters may have wood, metal, or ivory tips for loud playing and wool covered with India rubber for "sweet" playing.<sup>48</sup> The *kinnery* is a mythological creature that is half bird and half woman, though in male form is called *kinnara*. The term *kinnery* usually applies to a three-stringed zither with three gourds in India, but Kunst pictures a *kinnara* (male figure) playing a chest-resonated bar-zither.<sup>49</sup>

Somewhat mystifying is a small Japanese xylophone called *mokkin* with sixteen untuned wooden keys which strikingly resembles the *kinnery*. This instrument, said to have been "borrowed originally from the Japanese societies for Chinese music (Minshingaku),"<sup>50</sup> is used for sound effects in the *geza* (offstage) music in *kabuki* theatre. Whether there is a relationship with the Indian instrument cannot be determined yet. Perhaps there is a closer relationship with the Javanese flat xylophone (*gambang*) since Javanese influence in Japanese musical culture is known. We remain somewhat skeptical that the xylophone that Burney described as being Chinese is actually so.

One of these I saw when I was last in Paris ... was a kind of *Sticaddo*, consisting of bars of wood of different lengths, ... placed across a hollow vessel resembling the hull of a ship. The compass was two octaves, and the intervals were arranged in pentatonic order.<sup>51</sup>

46. S. Krishnaswami, *Musical Instruments of India* (Delhi : Publications Division, Ministry of Information and Broadcasting, 1965), p. 70.

47. *Encyclopédie de la musique et dictionnaire du conservatoire*, s.v. "Inde" (1 : 363-4).

48. F.J. Fétis, *Histoire générale de la musique*, 2 vols. (Paris : Librairie de Firmin Didot Frères, fils, et cie, 1869), 2 : 308.

49. Kunst, *Hindu-Javanese Musical Instruments*, fig. 43.

50. William P. Malm, *Japanese Music and Musical Instruments* (Rutland, Vermont : Charles E. Tuttle Company, 1959), p. 226.

51. Charles Burney, *A General History of Music*, 4 vols (London, 1776-1789; modern ed. by Frank Mercer, 1935; reprint ed. New York : Dover Publications, Inc., 1957), 1 : 46.

In Java the flat-keyed xylophone is called *gambang* and typically consists of twenty flat pieces of wood mounted directly on the resonator with felt separating the keys from the frame. On one side the keys are punctured by a metal pin and on the other they are separated by two pins, these being to keep the keys in place and separate them slightly. The *gambang* is played with two mallets with disc-shaped ends. Although its origin is unknown, its rather complex history and use are well described in two books by Jaap Kunst.<sup>52</sup> The appearance of the *gambang* is not strikingly different from the *kinnery* pictured in Fetis and Courant except that it is longer.

In Bali there are a great variety of xylophones, both flat and suspended, some originally xylophones and some believed to be wooden or bamboo imitations of metallophones (such as the *gender* or *saron*). Among the flat instruments is the *chungklik* with eight keys much like a Javanese *gambang*. Indeed, there are instruments called *gambang* which have large slightly curved keys cut from sections of bamboo but which are not consistently arranged large to small. The *churing* and *charuk* are also examples of ancient flat keyed xylophones while the term *rindik* is a generic term for bamboo-keyed imitations of the *gender*, the metallophones with resonators beneath the keys.<sup>53</sup>

Bali is also home to several suspended xylophones, though the method of suspension results in a flat appearance. The *trompong* with seven wood keys placed over two parallel supports has keys suspended on cords running parallel to and raised above the supports. Therefore, there are several inches between bars. The *petuduh* of the *gamelan selundèng* has thin flat keys suspended on cord over a resonating trough.<sup>54</sup>

Reference has already been made to the *calung*, the vertical bamboo xylophone found in Java and Sunda. A most interesting transformation of this instrument from vertical to suspended horizontal configuration occurs in the *gamelan calung*. Three similar looking but functionally differentiated *calung* (*demung*, *pembabar*, and *penitir*) are suspended horizontally over an inverted arch framework (not a resonator) and played with two disc-mallets in the manner of the *gambang*.<sup>55</sup> One suspects that this horizontal form was a later manifestation of the vertical form, but documentation is unavailable.

The type of xylophone in which the keys are suspended from cord over an inverted arch resonator is peculiar to the mainland. Indeed, it is found in only three cultures and only in their court traditions: the Burmese *pattala* with twenty to twenty-two keys, the Thai *ranat* with twenty-one, and the virtually identical Cambodian *roneat*.

52. See Jaap Kunst, *Music in Java and Hindu-Javanese Musical Instruments*.

53. Colin McPhee, *Music in Bali* (New Haven : Yale University Press, 1966), p. 32 and figs. 74, 76-8, 89.

54. *Ibid.*, figs. 75, 84-5.

55. Kunst, *Music in Java*, 1 : 292.

Xylophones are missing from the many relief carvings at Angkor Vat and other early Khmer monuments, and thus these sources shed no light on the origin of the Cambodian *roneat*.<sup>56</sup> As shown earlier, the Thai *ranat* cannot as yet be documented earlier than 1826 except for an illustration of uncertain vintage. The Burmese *pattala*, however, is apparently described in Alexander Hamilton's 1727 *A New Account of the East Indies* concerning Pegu. He writes:

They have one sort in the shape of a galley, with about twenty bells of several sizes and sounds, placed fast on the upper part, as it lies along. The instrument is about three feet long, and eight or ten inches broad, and six inches deep. They beat those bells with a stick made of heavy wood, and they make no bad music.<sup>57</sup>

Howard Malcom's 1839 *Travels* . . . also describes the "Pa-to-lah."<sup>58</sup> H.A. Popley, in his *The Music of India* (1921), also describes the Burmese xylophone but calls it *bastran*, the Indian pronunciation of *pattala*.<sup>59</sup>

The term *pattala* is, in fact, not of Burmese origin but is rather Mon (sometimes they are called Peguan or Talaing). *Pat* derives from the Sanskrit *pataha*<sup>60</sup> meaning drum. While in Burma *pat* continues to refer to drums (e.g., the circle of tuned drums is called *patwaing*), in Thai *pat* means percussion instruments generally and may derive also from either *pataha* or *vadya*, Sanskrit for instrument. *Tala* means "coffin, or any receptacle in which a corpse is placed to receive funeral rites."<sup>61</sup> Thus, the *pattala* is a set of struck keys over a coffin-like resonator. An argument for a Mon origin of the instrument is further strengthened by Haswell's study of the Peguan language where he defines *pattala* as, "a Mon musical instrument, about three quarters of a circle in form, . . ."<sup>62</sup>

56. See Jacques Brunet, "The Origins of Cambodian Music," in *Traditional Drama and Music of Southeast Asia* ed. Mohd. Taib Osman (Kuala Lumpur : Dewan Bahasa dan Pustaka, 1974).

57. Alexander Hamilton, "A New Account of the East Indies" in *A General Collection of the Best and Most Interesting Voyages and Travels in all Parts of the World* ed. John Pinkerton (London, 1811) : 8 : 427 (originally, Edinburgh, 1727).

58. Howard Malcom, *Travels in South-Eastern Asia, embracing Hindustan, Malaya, Siam, and China*, 2nd ed. 2 vols. in 1 (Boston : Gould, Kendall, and Lincoln, 1839), p. 205.

59. Herbert A. Popley, *The Music of India*, 4th ed. (New Delhi : Y.M.C.A. Publishing House, 1971), p. 128.

60. Sachs, *Musikinstrumente Indiens und Indonesiens*, p. 26.

61. *Judson's Burmese-English Dictionary*, p. 614.

62. The Rev. J. M. Haswell, *Grammatical Notes and Vocabulary of the Peguan Language*, 2nd ed. ed. Rev. E. O. Stevens (Rangoon : Rangoon Baptist Mission Press, 1901), p. 195.

Although the many Thai-Burmese wars culminating in the destruction of Ayutia in 1767 and the carrying-off of the Thai population allowed much cultural exchange, musical instruments may have travelled both directions. Not only can we document the existence of the xylophone in Burma earlier than in Thailand, and not only does the evidence point to a Mon origin, but F.A. Neale, writing about Siam in 1852, asserted that the *ranat* was of Burmese origin.

Next to the band-master comes the performer on the Siamese pianoforte. This, however, is in reality strictly a Burmese instrument of Burmese invention, and on which the Burmese far excel their flat-nosed neighbors... The notes are regular, and admit of a vast scope for cadence and harmony of touch, and there are some of the Burmese who fly over the notes with amazing rapidity and precision.<sup>63</sup>

### Oblique Xylophone

The final type (Type V) is the oblique xylophone, a type found only rarely in Java and Bali and not at all on the mainland. Kunst pictures one consisting of about thirteen tubes cut in the fashion of the *calung* (or *angklung*), quill-cut end upwards, mounted obliquely in a rather beautifully carved frame; the instrument is called an *angklung* and comes from Banyuwangi.<sup>64</sup> McPhee describes a smaller oblique xylophone from Bali called *grantang* consisting of about seven bamboo tubes in a frame played with two disc-mallets.<sup>65</sup>

### Conclusions

The *kaw-law* and *ranat*, being fundamentally different types of xylophones, do not appear to be directly related except that as a type the *kaw-law* is doubtless older. Since the *kaw-law* is not known to be a widely distributed instrument among the Lao of northeast Thailand or Laos, its antiquity is uncertain. That it is related to the Vietnamese hill-tribe instruments seems certain, but tracing that relationship is not possible at the present time. It should also be pointed out that the locale of the *kaw-law* is at the edge of the distribution of the vertical xylophone, not at the center, further evidence that it is a latecomer. The immediate predecessor of the *ranat* would seem to be the Burmese *pattala* according to available evidence.

We do not believe we can formulate a single theory to explain the origin of all xylophones in Southeast Asia and thus wish to offer several different possibilities, some more plausible than others.

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63. Neale, *Narrative of a Residence in Siam*, pp. 235-6.

64. Kunst, *Music in Java*, fig. 87.

65. McPhee, *Music in Bali*, p. 32 and fig. 73.

1. *An Indian origin.* A great number of mainland Southeast Asian musical instruments without doubt originated in India, spreading east with traders and missionaries. That the xylophone was among them is a possibility; indeed, the known antiquity of the Mon (Burmese) *pattala* points to India since the Mon were profoundly Indianized. Yet the lack of xylophones in India is striking, for they are not shown in ancient reliefs nor are they listed by the vast majority of writers about Indian instruments.
2. *An insular origin.* Xylophones are found in greater variety in the islands, and indeed those forms which are presumably the most ancient or "primitive" are found there—the leg and log xylophones. It could be argued that the vertical form (*calung*) was transformed into the horizontal form which in turn became the *gam-bang*. Difficulties with this theory are that instruments do not necessarily progress from simple to complex, that the horizontal *calung* is still fundamentally different from the flat-keyed *gambang*, and that mainland instruments cannot be explained except by the unlikely migration of the instruments from the islands to the mainland.
3. *A mainland origin.* The xylophone is among those instruments which are most likely indigenous to mainland Southeast Asia: jaw harp, free-reed mouth organ, knobbed metal gongs, and xylophone. This assertion seems probable because none of these instruments is of significance in India or China except the mouth organ (*sheng*) whose roots appear to extend to non-Sinitic peoples. In this theory the instruments followed the migrations of Indonesian-type peoples from the mainland to Borneo and further southeast to the other Indonesian islands. The vertical xylophone is the only one likely to have gone with them, however, and leaves us with the difficulty of explaining the origin of the *gambang* and *ranat*. The transformation from vertical to *gambang*, as stated above, is difficult to accept, and a diffusion of the *gambang* to the mainland where it became the suspended form is even more problematic.
4. *Poly-genesis or non-unified origin.* The most satisfying theory would be one which requires no "leap of faith" such as from vertical bamboo xylophone to a flat-keyed wooden one. First, it is worth noting that the creation of a xylophone, any type, is basically simple. Different peoples might take the logs or bamboo tubes which they find in nature and arrange them in different ways according to their preferences and all may be "original" in form. This includes the leg, log, vertical, and flat-keyed types with the suspended varieties close behind. Thus it seems likely that the vertical xylophone of mainland Southeast Asia did indeed migrate to Borneo and Indonesia and was transformed into the horizontal *calung*. It seems likely that the leg xylophone originated among insular peoples. It seems likely that the Mon could

have "invented" the suspended form which is found in Burma, Thailand, and Cambodia, though there may have been links further back to varieties now lost. With regard to the flat-keyed type (*gambang*), the leg type could have been its ancestor. The main difficulty remaining is explaining the *kinnery* of India and its possible relationship to the Javanese *gambang* types. If there is an Indian connection, it may be that the *kinnery* was the ancestor of the *gambang* and migrated to Indonesia at the same time that Indian culture generally travelled there.

The *kaw-law* and *ranat*, then, may be seen against the entire panorama of Southeast Asian xylophones. The *kaw-law* has, after all, an ancestry that reaches back into prehistory though its Galasin province form may be more recent. The *ranat* appears also to have an ancient heritage outside presentday Thailand. If the two are related in any way, the connection must have been during remote times. If so, then they have met again in modern times, bringing a kind of cycle to a close.



Figure 1. Small Beepat (piphal) ensemble featuring *ranat-ek* and *ranat toom* (front left + right), for accompanying a *likay* performance at the Siam Society in 1972.



Figure 2. *Bong-lang* (properly, *Kaw law*) played near Galasin, Thailand.



### Thai terms

(In order of appearance)

bong-lang โป่งलग  
 ranat-ek (toom) ระนาดเอก (ทุ้ม)  
 kaen แคน  
 lum ลูม  
 an-nungsü อ่านหนังสือ  
 pin พิณ  
 pleng look toong เพลงลูกทุ่ง  
 saw ซอ  
 pootai la-doop ผู้ไทเลาะตูป  
 döi hua non dan เตยหัวโนนตาล  
 lum plün ลูมเพลิน  
 döi duan hah เตยเดือนห้า  
 manoh gao chun มโนแก้วชั้น  
 bong dai mai บังไต้ไม้  
 mae hang glawm look แม่ฮ้างกล่อมลูก  
 nok sai kuam tong นกใส่ขี้ขี้มั่ง  
 kaw-law ขอลอ  
 dakaw ตาขอ  
 graw เกราะ  
 kaw mak galong ขอหมากกะโหล่ง  
 ban nah บ้านนา  
 kon โคน  
 beepat ปี่พาทย์  
 mahori มโหรี  
 beepat-rat-dapon ปี่พาทย์ราดตะโพน  
 rang รวง  
 nang nat นางนาค, นางนาฏ  
 jakeh จะเข้  
 kawng-wong ซ้องวง