Metamorphosis: The Sacred Gable in Siamese and South Indian Architecture

Michael Wright*

Abstract
No one would suggest that the sacred gable of Wat Na Phra Men in Ayudhya (fig. 1), which is made of wood and has recently been restored, and the sacred gable of Pralayakāleśvara Temple, Pennākadam (fig. 2), which is made of stucco and is a similar recent restoration, are directly related or that one derived from the other. This paper contends, however, that a careful study of the details and of their evolution, as far as it can be traced, reveals that they share a common origin in ancient India, and that their subsequent divergent development in South and Southeast Asia may tell us something about indigenous Southeast Asian creativity, and what it did with what had been learned from India.

Introduction
It is widely accepted that many items of Siamese sacred architecture were derived from Indian sources. Some of them, like the stūpa, are obvious and are not in doubt. In other cases, however, the Indian inspiration has been hidden by indigenous taste and construction techniques that completely disguise connections with Indian antecedents.

Indeed it might seem more sensible to look for the origin of the Siamese sacred gable in China or Indonesia, where similar graceful roofs and gables are to be found. However, a careful examination of the available evidence reveals only a common aesthetic sense shared by East and Southeast Asia. In contrast, the components of Siamese sacred architecture show an affinity not with China, but with India, in particular the south.

This paper is intended to show, mainly by visual means, that the Siamese temple gable is related, both directly and indirectly, to the gable of the ancient

* Public Relations Department, Bangkok Bank Ltd.
Figure 1. Sacred gable, Wat Na Phra Men, Ayudhya, wood, eighteenth century, frequently restored.

Figure 2. Sacred gable, Pralayakāleśvara Temple, Pennākadam, eleventh century, stucco recently restored.
Indian barrel-vault roof that was later widely employed in South Indian architecture as a decorative motif (Nāsi, Kūḍu) and as a halo (Prabhāmaṇḍala) for sacred images.

My reference is specifically to the "classical" gables of central Thailand (fig. 1), so I ignore the multiple-Nāga gables of the north, the northeast and Laos, which though having a similar origin, are complicated variations of the classical theme.

Before considering the visual evidence pertaining to the gable, it is necessary to review the effect of Southeast Asian taste upon architectural forms received from India.

Southeast Asian Taste

In Hindu architecture there is a tension between the desire for solidity and endurance ("for as long as the sun and moon shall last") and for great height (like Meru, rising from the underworld to the heavens). In Southeast Asia (and particularly in Siam), height means dignity, so tall, slim forms are favored and solidity tends to be sacrificed.¹

The stūpa thus changed shape from west to east and over the centuries, from a bubble in Lanka, to a bell in medieval Siam, to a fishing net hung up to dry in Bangkok (fig. 3). Something similar happened to the prasāda, which progressed over the centuries from a stepped pyramid in South India, to a pineapple in Cambodia (the steps of the pyramid there hidden by inward-sloping antefixes), to a corn-cob in fifteenth-century Ayudhya, and a "spaceship" in nineteenth-century Bangkok (fig. 4).

As the edifice becomes taller and slimmer, its outline tends to implode, so that the earlier convex form ultimately becomes concave.

The Siamese gable faithfully follows this rule. In the case of wooden domestic architecture in parts of Siam close to the sea and therefore open to contacts from overseas, the gable is simply a Siamese translation (concave) of the Indian barrel-vault gable (convex) (fig. 5).

The gables of Siamese temples (and palaces) reflect the gables of South Indian gopuraṁs, though the former are concave and the latter convex, in keeping with the rule already illustrated. Furthermore, there are other points of correspondence (fig. 6): each is surmounted by a hornlike device (kombu in Tamil); each is surrounded by a "rainbow" arch of spikes or rays or flames; the South Indian gable-boards terminate in inward-facing Makaras with florid Hamsas' tails, while the Siamese boards end in what seem to be multiple Nāga heads which, however, traditional Siamese architects insist on calling hang hong (หวงหง, Hamsas' tails); and each gabled end has a Hindu god in the center. On Siamese gables the god is most commonly Viṣṇu riding Garuda, less frequently Indra on Airavata, and relatively seldom (and more recently) Buddhist subject matter.

The two examples in figure 6 are thoroughly unsatisfactory for comparative purposes, as they are both fairly recent and highly developed, each having
diverged far from its antecedents. However, they are the best visual material available.

Figure 7 analyses the parts of the Siamese gable and provides its traditional, technical vocabulary.

At the apex of the Siamese sacred gable is a graceful hornlike device that seems to be a development of the Tamil kombu. To right and left descend flaming or spiky gabled boards (which may or may not have cusps), ending in what look like multiple Nāga heads.

The vocabulary that Thai architects and artisans use for these items is mysterious, because none of it quite makes sense. The horn is called *cho fa* (ช่ำหวัด, literally "sky bunch"), the gabled boards are *bai raka* (ไก่แก้ว, chicken boards?), and what look like multiple Nāga heads are called *hang hong* (Hamṣas’ tails).

Only the last item, *hang hong*, corresponds precisely with the Tamil "Ānavāl" i.e. the Hamṣas’ tails of the Makaras. Furthermore, the Siamese gable lacks the monster–mask so characteristic of the Tamil gable, and of the Makaras nothing remains but the name of the tail.

Despite these possible correspondences, the massive confusion of shapes and vocabulary might suggest that there was little or no connection between the Siamese and the South Indian sacred gable. However, these anomalies might be explained, and close correspondences established, if it could be shown that South Indian architectural ideas arrived in Siam in two different waves from two different directions. I shall try to show that these two waves were each reinterpreted locally and later combined, giving rise to the apparent confusion that we perceive in the extant Siamese sacred gable and its vocabulary.

**The Two Waves**

In mainland Southeast Asia we have ample evidence of at least two waves of artistic inspiration from South India. (For practical reasons I ignore input from elsewhere in India.)

The first wave seems to have arrived in Cambodia in the early years of the Common Era (Briggs 1951), where it evolved independently and was later adopted in Siam.

The second wave came directly to Sukhothai in Siam, most probably in the mid–fourteenth century, perhaps via Sri Lanka. There it immediately began to evolve independently and was soon mixed with the first wave that the Siamese had adopted via Cambodia.

**The First Wave**

Our best early evidence of South Indian architecture in mainland Southeast Asia is the large number of early brick temples (Briggs 1951) in Cambodia and northeast Thailand that probably reflect the brick architecture of the early
Pallavas, now lost in South India where such temples were demolished and rebuilt in stone (American Institute of Indian Studies 1983).

An example is Prasat Bayang, in the extreme southeast of Cambodia (fig. 8), dated by inscriptions to the early seventh century (Briggs 1951). In detail after detail it resembles the Ganesha Ratha at Mamallapuram (fig. 9), an early monolith thought to be modeled on the earlier brick and wooden architecture (except for the entrance of the Ganesha Ratha which is derived from cave temples).

The detail of most early brick architecture in Cambodia is lost, and when the Cambodians began building in stone (ninth to tenth century?) we find that the "order" has changed drastically (fig. 10). The monster–mask at the apex of the gable disappears and reappears on the pediment and/or lintel over the doorway. And the inward–facing Makaras with their outward–facing Haṃsas' tails become outward–facing multi–headed Nāgas (Smitthi n. d.; this also occurs in Pallava architecture, for instance at the Kailasanatha in Kanchi). Furthermore, the inner border of the flaming arch develops cusps which, according to Coomaraswami (1992, 76), are inherent in the classical Indian gable. In some Siamese temples these cusps became highly developed, so that the gable boards could be hung on at least one pair of purlins (fig. 6B). In other examples, the inner border of the gabled board is smooth and without cusps, as is usually the case in South India.

Within the lintel itself a similar development occurred, with the inward–facing Makaras being replaced by outward–facing multi–headed Nāgas (fig. 11).

This was the artistic legacy that the Siamese absorbed from Cambodia and then developed in their own terms, the evidence of South Indian origins already having been scrambled.

The Second Wave

In Sri Lanka

At Gampola, the capital of Sri Lanka in the fourteenth to fifteenth centuries, two important Buddhist temples, Gadaladenia and Lankatilaka, were completed in 1344 and celebrated by inscriptions in the living rock that give both the date of completion and the names of the architects. The names are South Indian: Sthāpatirāyarā and Ganeshvarācāri (Mudiyanse n. d., 113–118).

In both temples at Gampola, the principal Buddha image sits under a stucco Makara Torāṇa, which derives from the South Indian gable or Prabhāmanḍala, with its monster–mask, fiery rainbow and inward–facing Makaras with their Haṃsas' tails. Both temples were liberally decorated with scenes from the life of the Buddha, executed in stucco. The stucco work extant at the Lankatilaka is very fine, but is probably the result of several renovations, so one hesitates to use it for comparative purposes.
In Siam

Among the many Buddhist temples at Sukhothai there are at least two, Wat Mahādhātu and Wat Traphang Thong Lang, that carry outstanding Makara Toranas and scenes from the life of the Buddha. These stuccos are much ruined and may perhaps date from the founding or renovation of these temples in the mid–fourteenth century (Griswold 1967).

At Wat Mahādhātu, there were twelve stucco pediments, in South Indian Prabhāmaṇḍala form, of which only one complete specimen (fig. 12) and some fragments remain.

At Wat Traphang Thong Lang, a square–plan monument bears on three of its faces scenes from the life of the Buddha in stucco. The art style seems out of place in Siam but would cause no surprise if discovered at a medieval temple in Lanka.

This visual evidence, while interesting in itself as evidence for contact between Lanka and Siam, becomes much more intriguing if we compare Inscription 2, Wat Si Chum, Sukhothai (Fine Arts Department 1983,58–79), with the two inscriptions of Gampola, Sri Lanka, already mentioned.

Inscription 2, Wat Si Chum, was composed by the Siamese prince–priest "Sri Sraddha Rajaculamani Sri Ratana Lankadvipa Mahāsāmi" who recounts his works of merit both in Siam and during a pilgrimage to Lanka. Though the inscription is undated, most scholars ascribe it to the 1350s or 1360s, and the events therein to the first half of the fourteenth century. The author recounts that he participated in the installation of the Sacred Tooth at "Kambalai" (Tamil for "Gampola"). As this event took place in the early 1340s, the Siamese pilgrim may have been in Gampola when Sthāpatirāyarā and Ganeshvarācārī completed the construction of the Lankatilaka and Gadaladeniya in 1344 (according to the Gampola inscriptions).

The point of interest occurs in side 2 lines 40–42 (of Inscription 2) where the author says: "On leaving Lanka, His Highness the Mahāsāmi brought a team of ... to renovate the old holy monuments [phra kao than³], and he brought two holy relics from Sinhala to enshrine therein" (Griswold and Prasert 1972, 125–6).

The lacuna is today totally illegible, as though the word had been purposely erased, but it is difficult to imagine how else it could be filled except with the word "craftsmen" or "artisans," suggesting either Sthāpatirāyarā or Ganeshvarācārī, or both.

The dating of these Sukhothai stuccos is controversial. However the extreme ferocity of the Kirtimukha and Makaras at Wat Mahādhātu (fig. 12) seems to reflect the ferocity of medieval South Indian Makara Toranās (admittedly difficult to date with confidence), and the stuccos at Wat Traphang Thong Lang seem to reflect the earlier art at Polonnaruva rather than the extant (and much renovated) stuccos at Gampola.

With this visual evidence and the evidence of Inscription 2, I should like to propose that a second wave of South Indian architectural ideas arrived in Sukhothai in the mid–fourteenth century. This new wave was soon absorbed and adapted to suit Siamese taste.
Metamorphosis of the Makara Torana

The Siamese must have found it fairly easy to adopt and adapt the second wave because their sacred architecture was already based on the first wave from South India that they had absorbed via Cambodia. Indeed at both temples (Mahâdhâtu and Traphang Thong Lang) we find the South Indian stuccos juxtaposed with stuccos of Cambodian inspiration.

The metamorphosis from Makara Torana to Siamese temple gable cannot be followed in detail, because so much of the evidence has been lost. However, the broad outline of the metamorphosis may be reconstructed from a few survivals and throwbacks.

Taking as our starting point the surviving pediment at Wat Mahâdhâtu (fig. 12), the next surviving step occurs in the aura of the Jinarâja Buddha (fig. 13) at Phitsanulok, one of Sukhothai’s sister cities. The huge Buddha, in bronze, is thought to date to the late fourteenth century. Its aura, in gilt-lacquered wood, might be of a similar date or considerably later.

Here we see a Makara Torana employed as Prabhâmanâda for a sacred image, just as at the fourteenth-century temples in Gampola. However, this example is well on the way to becoming a Siamese temple gable. Though still convex, the form has become taller and slimmer, in keeping with Thai taste. The monster mask has disappeared except for vestiges in the foliate design that occupies the much elongated horn. The flaming rainbow has developed cusps on the inside, in line with Cambodian architecture; and the Makaras (much simplified) face outward, also in line with Cambodian practice. They spew forth graceful masses of flowers to make up for the lost Ha̱msas’ tails of inward-facing Makaras.

The metamorphoses we have been discussing are not entirely explicable in terms of taste; it is obvious that construction materials also played an important part.

It is noteworthy that South Indian gopuraṁs, whether of stone or solid brick construction, are always roofed with fake tiles in stucco (fig. 6A), suggesting that at an earlier time such roofs were of wooden construction, clad in real tiles.

The adoption of stone construction by the South Indians and the Cambodians in the second half of the first millennium enabled them to develop great architectural mass. When the Thais readapted that stone construction back to brick and wood in the fourteenth century, mass was lost in favor of grace, but the Hindu god retained his prominent position at the center of the gable, and the wooden roof structure was again clad in real tiles (fig. 6B).

Later "Throwback" Evidence

In the Chandrakasem Museum at Ayudhya, there is a wooden panel for the display of Buddhist votive tablets (LL&J IV::bfl~fl) (fig. 14), impossible to date.
accurately but most trained eyes would probably agree "late Ayudhya" (seventeenth to eighteenth century).

Its summit is a typical sacred gable, consisting of cho fa, bai raka and hang hong. In this case, however, the outline remains more convex than concave; the hang hong are clearly Hamsa's tails, not Nāgas' heads; furthermore other features of the inward-facing Makaras may be discerned, including the eyes.

At Wat Khao Bandai It in Phetchaburi, the doors of the vihāra are surmounted by stucco pediments in gable form (fig. 15). These are difficult to date, but might be ascribed to the third reign, or possibly much later. In this case the outline is again more convex than concave. This pediment shows surprising archaic input, for at the "breast" of the cho fa is a monster mask in the South Indian manner, and below it two flaps or "wings" that still occur in South Indian temple gables, though nowadays higher up, to right and left of the monster's jaws (fig. 2).

Even modern temples, if following tradition, contain archaic features that have neither been remarked upon nor explained. Wat Benchamabophit is a case in point.

At Wat Benchamabophit, each and every bai raka bears a wavy line a foot or so below the "breast" of the cho fa ("A" in fig. 7). This is inexplicable, unless it corresponds to the flaps seen at Phetchaburi (fig. 15), and the "wings" seen behind the cheeks of the monster-mask in South India (fig. 2). Another wavy line occurs a foot or two above the lowest point of each bai raka ("B" in fig. 7). This might be interpreted as a vestige of the Makara's mouth.

Furthermore, one may note ("C" in fig. 7) that the lowest spike of the bai raka is deformed in comparison with all the other spikes, and that it contains a raised dot or eye. It is very difficult to account for this feature, unless it is taken to be a vestige of the inward-facing Makara with its eye and elephant's trunk, such as may be seen on the stucco gables of any South Indian temple (fig. 2). If this is so, then it justifies Thai architects calling the terminal feature a Hamsa's tail (hang hong), though it closely resembles a multiple Nāga head.

**Meaning and Transference**

If the Siamese sacred gable does indeed have its origin in South India, then it must be considered a Hindu artifact with a Hindu meaning involving the agricultural cycle, birth, death and fertility. The stock elements are all there: the Kirtimukha (a lion mask) is a sun symbol, the Makaras (or Nāgas) are water symbols, and between them springs a rainbow of vegetation and light, though the Kirtimukha is also Kāla, a death symbol, all-devouring time.

It is therefore legitimate to wonder how and why this powerful animist symbolism came to dominate Siamese Buddhist temple architecture. The answer is complex and multidimensional.

First of all, the Buddha's teaching about birth and death was addressed to newly urbanized folk who were losing their agricultural roots. It was an age of
anxiety in which philosophers were needed to explain the horror of death that prehistoric farmers had accepted with equanimity as a parallel with the death and rebirth of vegetation. Thus there was no conflict between the Buddha's philosophy of radical impermanence and the sacred gable's animism; indeed the one supported the other.

When Buddhism first arrived in Southeast Asia, it is possible that the animist symbolism of the religion rendered the philosophy understandable and acceptable to the local people who were probably still very much at home with the cycle of vegetation.

Originally, Hinduism had no architecture. It was the Buddhists (and Jains) who first adapted secular architecture for religious purposes, and the Hindus borrowed from them. Later as Buddhist ritual became more elaborate, the Buddhists began to borrow the elaborate forms developed by the Hindus. It is therefore hardly surprising that in medieval Lanka we find Buddha images surrounded by the Hindu Prabha- manḍala/Makara Torana. The distinction between Buddhist and Hindu architecture was breaking down.

At another level, we find that in Southeast Asia kings were equated with Hindu gods, particularly Viṣṇu. As a result, Siamese palaces since the Ayudhya period seem to have appropriated some of the characteristics of a South Indian Viṣṇu temple, with its sacred gable and spire dominated by Garudas.

When Siamese kings built Buddhist temples, they naturally bestowed upon them the best architecture that they knew, namely that of their own palaces, with their sacred gables and the Viṣṇu–on–Garuda theme. None of this was accidental; it all grew out of the past.

Since the death of Prince Narit (H.R.H. Prince Narisranuvattivongse) who designed Wat Benchamabophit, the last great example of traditional Siamese architecture, there has been a steady loss of memory and understanding. As a result, Siamese architecture has become repetitive. When originality is attempted, the tendency is to innovate wildly, tradition being forgotten or misunderstood.

Further critical study of traditional architecture (for instance why such–and–such a thing was done, and what it meant), might breathe new life into architecture in Thailand today, opening up new possibilities for intelligent innovation.

Conclusion

Though the graceful concave roof and gable is endemic to East and Southeast Asia, the details of the Siamese sacred gable are not to be found elsewhere within the region. If they are related to anything, anywhere, then it is to the sacred gables of South India.

Within Southeast Asia, the Siamese sacred gable bears some resemblance to the Batak gable of Sumatra with its monster mask at the apex. However, Achim Sibeth (1991) has suggested that the Batak people, with their Tamil sounding clan–names, may have been influenced by immigrants from South
India. Furthermore they call their monster mask "Singa," i.e. the lion mask that surmounts the typical South Indian gable.

To the unguided eye, the Siamese sacred gable is entirely different from the sacred gable of South India. Careful study, however, reveals that they are analogues, one of the other.

From the aesthetic point of view there is no confusion: the South Indians produced a work of power and terror; the Siamese reinterpreted it in entirely different terms, and produced a work of grace and beauty.

From the point of view of scholarship, however, the confusion is multidimensional. First, the Cambodians reinterpreted the first wave of South Indian architectural ideas in their own terms, possibly prompted in part by their indigenous reverence for the Nāga (the Indian Makara, derived from Greco-Roman art, being far too alien).

The early change in construction materials, from brick and wood to stone, would have provided a second occasion to innovate.

Third, when Cambodian architecture was adopted by the Siamese, who favored brick, wood and tiles, further change was inevitable.

Fourth, when the second wave of South Indian architectural ideas arrived at Sukhothai in the fourteenth century it was enthusiastically adopted and almost immediately adapted in terms of indigenous taste, to fit in with the first wave that had arrived much earlier via Cambodia. This caused further complications.

Finally, the vocabulary became confused when new technical terms were invented to replace old, forgotten terms—with one exception: Thai architects still insist on calling the multiple Nāga heads received from Cambodia "Haṃsas' tails," recalling the inward-facing Makaras with their outward-facing Hamsas' tails that derive from the Indian tradition.

This, for me, was the key, because it would be irrational to call multiple Nāga heads "Haṃsas' tails" without a very good reason. This clue led me back to the Makara with its Haṃsa tail, and the whole ensemble of the Makara Toraṇa in South India.

The argument was clinched, for me, when I recognized that the eye and deformed lowest spike of the bai raka ("C" in fig. 7) corresponded exactly with the eye and elephant's trunk of the Makara (fig. 2) in South Indian architectural decoration. Though Thai architects had been hugely original in what they did with the Indian sacred gable, they had also been extremely conservative (I am tempted to say "faithful") in preserving this feature.

For well over a century, scholars have written about "Indian influence in the arts and cultures of Southeast Asia." Today such a general statement is no longer good enough, because it hides precisely how and when India "influenced" Southeast Asia. It also conceals the indigenous genius and how it adopted and adapted Indian ideas.

This paper is an attempt to be strictly specific and to indicate precisely how and when one particular Indian idea arrived in Southeast Asia and how the genius of Southeast Asia developed it into something quite new.
I therefore offer this evidence to suggest that the relationship between South and Southeast Asia art needs re-examination. The old idea that "everything in Southeast Asia came from India" is now no longer credible. On the other hand, the new thinking that extols indigenous creativity by rejecting "Indian influence" out of hand is neither fertile nor realistic.

Southeast Asia does not shine brighter when the light of India is blocked out, because so little material evidence survives from pre-Indian Southeast Asia. What does survive (for instance at Ban Chiang) is very impressive, but it can tell us only so much.

In contrast, a careful study of "Indian influence" and what Southeast Asians did with it can tell us much more about indigenous intelligence, taste and creativity.

Notes

1. Something similar happened early in South India. At Mamallapuram, compare the stocky mid-seventh-century Dharmaraja Ratha with the tall, slim, eighth-century Shore Temple.

2. This second wave has been noted by many scholars, usually under the rubric "inspiration from Ceylon," as few scholars of Siamese art are aware of the extent of South Indian influence in medieval Lanka.

3. The erudite translators misinterpret three key words, turning "old holy monuments" into "nine sacred objects" (Griswold and Prasert 1972, 125).
References


METAMORPHOSIS: THE SACRED GABLE

Figure 3. Metamorphosis of stupa, from convex to concave.

Figure 4. Metamorphosis of prasāda from convex to concave.

Figure 5. Traditional domestic gables.

A. Computer-generated simplification of South Indian gabled roof-structure, cruciform Vimanam of Pralayakāleśvara Temple, Pennākadam, eleventh century, recently restored. Note Viṣṇu on Garuda, bai raka (with adorants), hang hong, and cho fa (hidden by monster-mask at center, but visible in profile); also fake tiles in stucco over brick.

B. Computer-generated idealization of Siamese gabled cruciform roof-structure; no monster mask, adorants within pediment, bai raka with cusps in the Cambodian manner, real tiles on wooden rafters; otherwise an analogue of A. This is not to suggest that B derives from A, but that they share a common origin.
Figure 7. Elements of the wooden Siamese sacred gable.

A. This feature corresponds to the "flaps" beneath the monster-mask in figure 15 and the "wings" to the left and right of the monster-mask in figure 2.
B. This feature corresponds to the mouth of the Makara, as seen in figures 2 and 14.
C. The "deformed" lower spike of the bai raka, with its "eye," corresponds to the eye in figure 14, and the eye and elephant's trunk of the Makara in figure 2.
Figure 8. Prasat Bayang, Cambodia, brick, early seventh century.

Figure 9. Ganesha Ratha, Mamallapuram, monolith, mid-seventh century.

Figure 10. Cambodian architectural order, Mandapa, sandstone, Phanom Rung, north-east Thailand, twelfth century.

A. Kirtimukha disappears from apex.
B. Kirtimukha reappears on pediment and/or lintel.
C. Outward-facing, multi-headed Nāgas replace inward-facing Makaras.
D. Inner edge of arch develops cusps.

Figure 11. Development of Cambodian lintels.

**Top:** Seventh to eighth century, inward-facing Makaras, with Hamsas' tails facing out.

**Bottom:** Tenth century, Kirtimukha, outward-facing, multi-headed Nāgas.
Figure 13. Jinarāja Buddha, bronze, mid-fourteenth century (?), with Prabhāmaṇḍala, wood, of undetermined date, apparently a development of the Makara Torāṇa in figure 12.
Figure 14.
Panel for the display of Buddhist votive tablets, late Ayudhya, now in the Chandrakasem Museum. The "roof" consists of a sacred gable with vestiges of a monster-mask on the breast of the cho fa, and below it two "flaps." The bai raka terminate in vestigial inward-facing Makaras, the eyes clearly retained. The hang hong are indeed Hamsas' tails, not multiple Nāga heads.

Figure 15.
Pediment, stucco, Wat Khao Bandai It, Phetchaburi, nineteenth century (?). Note Kirtimukha at base of horn, and wing-like flaps below jaw; compare figure 2.