

Summary of palatal dentition in Choristodera

| Genus | | <i>Cteniogenys</i> | <i>Monjurosuchus</i> | <i>Philydrosaurus</i> | <i>Hyphalosaurus</i> | | <i>Lazarussuchus</i> |
|--|---|--|---------------------------------|-------------------------------|----------------------|-----------------------|---|
| Species | | sp. | sp. | <i>proseilus</i> | <i>lingyuanensis</i> | <i>baitaigouensis</i> | <i>inexpectatus</i> |
| Vomer | number of tooth rows | ? | 1 | 2 | 1 | ? | ? |
| | width of the row | ? | 1 to 2 | 1 to 2 | 1 to 2 | - | - |
| | tooth tips | ? | Straight | ? | Straight | - | - |
| Palatine | number of tooth rows | 1 | 1 | 1 | 2? | - | 1 |
| | width of the row | 1 | 1 | 1 to 2 | 1 to 2 | Present | 1 |
| | tooth tips | Straight | Straight | ? | ? | - | - |
| Pterygoid | number of tooth rows | 1 | 2 | 2 | 2? | 2 | At least 1 |
| | width of the row | 1 to 6 | 1 | L* (2 to 3); M* (1 to 3 or 4) | ? 1 to 2 | 1 | 1 |
| | tooth tips | Posteriorly curved | Random directions | ? | ? | ? | - |
| Pterygoid flange | number of tooth rows | 1 | Absent | ? | ? | ? | ? |
| | width of the row | 1 to 3 | - | - | - | - | - |
| | orientation of tooth tips | Straight | - | - | - | - | - |
| Parasphenoid | Absent | Absent | Absent | ? | ? | ? | ? |
| Palatal tooth morphology | Conical | Conical | ? | Conical | ? | ? | ? |
| Tooth enamel | Limited to the tip and striated | ? | ? | ? | ? | ? | ? |
| Tooth size | ? | The teeth are smaller in posterior elements, but within the pterygoid, medial row is larger than the lateral row (particularly in posterior part). | ? | ? | ? | ? | ? |
| Start point of the vomerine row | ? | Close to premaxilla | Close to premaxilla | Close to premaxilla | ? | ? | ? |
| Posterior end of the pterygoid tooth row | Posterior to marginal tooth row | ? | Posterior to marginal tooth row | ? | ? | ? | ? |
| Nasopalatal trough | Absent | Absent | Present | ? | ? | ? | ? |
| Location of choana (against marginal tooth row length) | 44.4% | ? | 44.4% | 40.1% | ? | ? | About half way along the marginal tooth row |
| Pterygoid flange | 45 | 40 | 35 | ? | ? | ? | ? |
| References or examined specimens | BMNH R11759 and UCL uncataloged specimens | IVPP V14261 | Gao et al., 2007 | Gao et al., 1999; IVPP V11705 | Gao and Ksepka, 2008 | Hecht, 1992 | |

* M, medial tooth row; Ma, anteromedial tooth row; Mp, posteromedial tooth row; L, Lateral tooth row; La, anterolateral tooth row; Lp, posterolateral tooth row

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| Genus species | <i>Tchoria</i> | | <i>Ikechosaurus</i> | <i>lemoinei</i> | <i>Simoedosaurus</i> | | |
|--|--|---|---|---|---|---|---|
| | <i>namsarai</i> | <i>klauseni</i> | <i>sunalinae</i> | | sp. | <i>dakotensis</i> | |
| Vomer | number of tooth rows | 1 | 1 | 1 | 1 | 1 | |
| | width of the row | 1 | 7 | 1 to 2 | 1 to about 8 | 1 to 6 | 1 to about 9 |
| | tooth tips | Straight | ? | Straight or posteriorly curved | Posteriorly curved | Straight or posteriorly curved in anterior tooth row; posteriorly curved in posterior tooth row | Straight in anterior tooth row, but pointed backward posteriorly in posterior tooth row |
| Palatine | number of tooth rows | 1 | 1 | 1 | 1 | 1 | |
| | width of the row | 1 to 2 (or3) | 1 to 3 (or 4) | 1 to 2 | 1 to 16 | 1 to 11 | 1 to about 21 |
| | tooth tips | ? | ? | Posteriorly curved | Sharp, posteriorly curved | Straight in anterior tooth row, but posteriorly curved in posterior row | Straight in anterior tooth row, but posteriorly curved in posterior tooth row |
| Pterygoid | number of tooth rows | 2 | 1 | 2 | 2 | 2 | 2 |
| | width of the row | L* (more than 1); M* (3 to 4) | maximum 7 (L* or M*) | L* (1 to 10); M* (3 to 7) | L* and M* (1 to 15) | L* (1 to 12); M* (1 to 14) | L* (1 to 21); M* (1 to 16) |
| | tooth tips | Straight | ? | Posteriorly curved in anterior tooth row, but medially curved in posterior row | Sharp, posteriorly curved | Sharp, posteriorly curved | Straight and posteriorly curved |
| Pterygoid flange | number of tooth rows | 1 | ? | 1 | 1 | 1 | |
| | width of the row | At least 2 | - | 1 to 5 | ? | 1 to 11 | 2 to 18 (or 19) |
| | orientation of tooth tips | ? | - | medially curved | ? | Medially curved | Medially curved |
| Parasphenoid | Absent | ? | 1 | Absent | Absent | Absent | |
| Palatal tooth morphology | Conical | ? | Conical, sharp tip | Conical, sharp, curved tip | Conical, sharp, curved tip | Conical but slightly rounded tip | |
| Tooth enamel | ? | ? | Strong ridges in both sides | Exposed area above alveolus covered by weak striations but enamel cover on base is uncertain. | Exposed area above alveolus covered by weak striations but enamel cover on base is uncertain. | Covered on tips | |
| Tooth size | Equal on vomer and palatine | ? | Generally large anteriorly, small posteriorly, but lateral pterygoid tooth row is larger than the medial row. Pterygoid flange teeth are laterally large. | Generally large anteriorly, small posteriorly, but lateral pterygoid tooth row is larger than the medial row. Pterygoid flange teeth are laterally large. | Generally large anteriorly, small posteriorly, but lateral pterygoid tooth row is larger than the medial row. Pterygoid flange teeth are laterally large. | Generally large anteriorly, small posteriorly, but lateral pterygoid tooth row is larger than the medial row. Pterygoid flange teeth become larger anterolaterally. | |
| Start point of the vomerine row | 3 marginal tooth positions anterior to choana | 4 marginal tooth positions anterior to choana | anterior to the choana | 4 maxillary tooth positions anterior to the choana | 4 or 5 maxillary tooth positions anterior to the choana | 2 maxillary tooth positions anterior to the choana | |
| Posterior end of the pterygoid tooth row | Posterior to the marginal tooth row | Same level as the marginal tooth row | Posterior to the marginal tooth row | Posterior to the marginal tooth row | Posterior to the marginal tooth row | Posterior to the marginal tooth row | |
| Nasopalatal trough | Present | Present | Present | Present | Present | Present | |
| Location of choana (against marginal tooth row length) | 40.4% | ? | ? | 44.0% | 47.1% | 40.9% | |
| Pterygoid flange | 10 | ? | 30 | ? | 30 | 20 | |
| References or examined spesimens | HMNS 960720; Efimov, 1975, Efimov and Storrs, 2000 | Ksepka et al., 2005 | IVPP V9611-3 | MNHN BR 1935 | SMNS 59026 | SMM P76.10.1 | |

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| Genus | | Champsosaurus | | | | | | | | |
|--|---|---|---|-------------------------------------|---|---|---|--|--|--------------------------------|
| species | <i>lindoei</i> | <i>albertensis</i> | <i>laramiensis</i> | <i>ambulator</i> | <i>natator</i> | <i>dolloi</i> | <i>gigas</i> | <i>tenuis</i> | sp. | |
| Vomer | number of tooth rows | 1 | 1 | 1 | 1 | 1 | 1 | 1? | 1 | |
| | width of the row | 1 to 2 | 1 to 2 | 1 to 2 | 1 to 2 | 1 to 2 | 1 to 4 | 1 to 2 | 1 to 2 | |
| | tooth tips | Straight in anterior row, posteriorly curved in posterior row (RTMP87.36.41) ; all teeth posteriorly curved (RTMP94.163.01) | Straight and posteriorly curved | ? | ? | Straight | ? | Straight in anterior row, posteriorly curved in posterior row | ? | Straight or posteriorly curved |
| Palatine | number of tooth rows | 1 | 1 | 1 | 1 | 1 | 1 | 1? | 1 | |
| | width of the row | 1 to 2 (only one in RTMP94.163.01) | 1 to 3 | 1 to 5 | 4 to 7 | 1 to 2 | 1 to 2 | 1 to 4 | At least 1 to 3 | |
| | tooth tips | Straight (RTMP87.36.41); posteriorly curved (RTMP94.163.01) | Random directions but mostly straight | ? | ? | ? | Straight | Tips straight and rounded (might be worn) in anterior row, but sharp and posteriorly curved in posterior row | Straight | Straight |
| Pterygoid | number of tooth rows | 2 | 2 | 2 | 2 | 2 | 4 | 3 (1lateral, 2 medial rows) | at least 1 | 4 (2 lateral, 2 medial) |
| | width of the row | L (1 to 3); M (1 to 2) in RTMP 87.36.41 LM(1 to 2) in RTMP94.163.01 | L* (1 to 3 or 4); M* (1 to 2) | L*(1 to 5); M* (1 to 3) | L* (4 to 8); M*(2 to 7) | L*(1 to 3); M*(1 to 4) | La* (2 to 6); Lp*(1); Ma* (3); Mp* (1) | L* (1 to 3 or 4); Ma*(1 to 8); Mp*(1 to 3) | 1 to 7 (or 9) | La*(1); Lp*(1); Ma*(1); Mp*(1) |
| | tooth tips | Straight (RTMP87.36.41); posteriorly curved (RTMP94.163.01) | Random directions | ? | ? | ? | ? | Posteriorly curved in posterior row | Straight or posteriorly curved | ? |
| Pterygoid flange | number of tooth rows | 1 | ? | 1 | 1 | ? | ? | 1 | 1 | |
| | width of the row | 1 to 3 in RTMP 87.36.41 1 to 2 in RTMP94.163.01 | - | 1 to 3 | 2 to 3 | ? | ? | 1 to 2 | 1 to 2 | |
| | orientation of tooth tips | Straight? | ? | ? | ? | ? | ? | ? | ? | |
| Parasphenoid | Absent | Absent | Absent | Absent | Absent | Absent | Absent | Absent | Absent | |
| Palatal tooth morphology | Conical | Conical | ? | Conical | Conical | ? | Conical | Conical | Conical | |
| Tooth enamel | Teeth colour changes to black while base is brown which may imply a border between the enamel and dentine. | Teeth colour changes to black while base is brown which may imply a border between the enamel and dentine. Strong ridges on each side and numerous weak lines | ? | ? | ? | ? | ? | Possibly enamel cover on two-thirds of the tooth crown with weak striation. | ? | ? |
| Tooth size | Generally large anteriorly, small posteriorly, but lateral pterygoid tooth row is larger than the medial row. In pterygoid flange teeth are laterally large but not much difference in anterior and posterior | Generally large anteriorly, small posteriorly, but lateral pterygoid tooth row is larger than the medial row. | ? | ? | ? | ? | Generally large anteriorly, small posteriorly, but lateral pterygoid tooth row is larger than the medial row. | ? | Generally large anteriorly, small posteriorly. | |
| Start point of the vomerine row | 4 marginal tooth positions anterior to choana | 4 marginal tooth positions anterior to choana | 2 marginal tooth positions anterior to choana | ? | 4 marginal tooth positions anterior to choana | 5 marginal tooth positions anterior to choana | 3 marginal tooth positions anterior to choana | ? | 7 marginal tooth positions anterior to choana | |
| Posterior end of the pterygoid tooth row | Posterior to the marginal tooth row | Posterior to the marginal tooth row | Posterior to the marginal tooth row | Posterior to interpterygoid vacuity | Posterior to the marginal tooth row | Posterior to suorbital fenestra | Posterior to the marginal tooth row | Posterior to the marginal tooth row | Posterior to the marginal tooth row | |
| Nasopalatal trough | Present | Present | Present | Present | Present | Present | Present | Present | Present | |
| Location of choana (against marginal tooth row length) | ? | 65.0% | More than 50 % | More than 50 % | 65.2% | ? | 70.4% | 79.4% | 80.3% | |
| Pterygoid flange | 20 | ? | 30 | ? | 20 | ? | 20 | ? | 30 | |
| References or examined spesimens | RTMP 87.36.41; 94.163.01 | RTMP 86.12.11 | Brown 1905; Sigogneau-Russell, 1979 | Sigogneau-Russell, 1979 | NMC 8919 | IRSNB R21, 1568, 3662 | SMM P77.33.24 | SMM P79.14.1 | MNHN BR-9-P | |

* M, medial tooth row; Ma, anteromedial tooth row; Mp, posteromedial tooth row; L, Lateral tooth row; La, anterolateral tooth row; Lp, posterolateral tooth row