

A CATALOGUE OF INDIAN FOSSIL AMPHIBIA

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(With 1 Text-figure)

I—INTRODUCTION

According to Romer (1953¹), about 260 genera of fossil Amphibia are so far known in the world. Of these, only 13 genera, comprising 17 species, have been reported from India, and most of them from the Gondwanas. Yet, no catalogue of the Indian fossil Amphibia is available. Some information on the fossil species together with references to published literature have been given by La Touche (1917-1926²), and since then a number of workers have contributed to the subject. But all these data are scattered through the literature. An attempt has, therefore, been made here to present a catalogue of Indian fossil Amphibia, together with a bibliography on the subject.

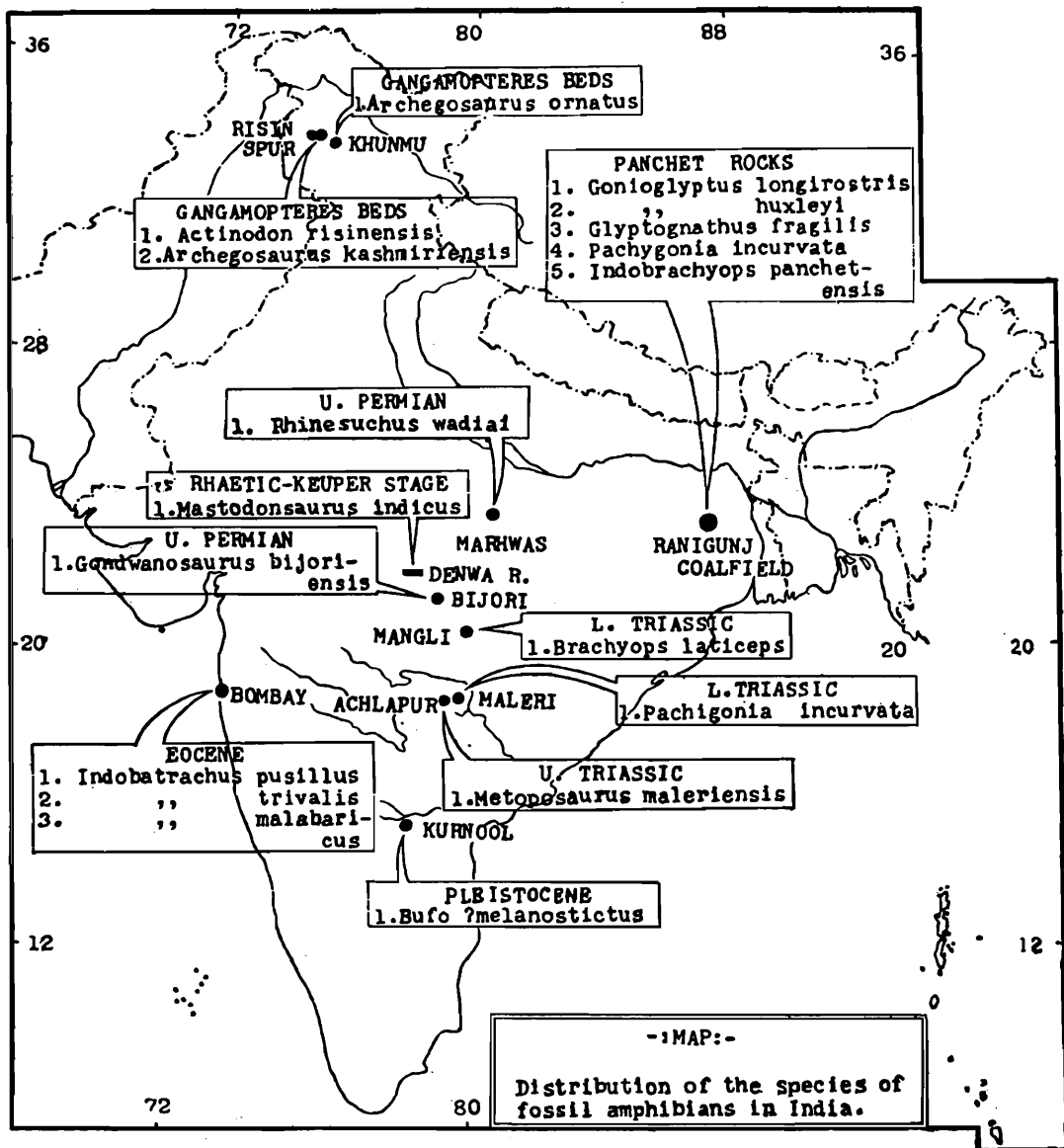
In this paper, all the known Indian fossil amphibian genera and species, and some unidentified material of the group known so far from the literature cited in the bibliography are given, together with distribution of the different species, their localities and geological horizons. Also, the distribution of the different species, their localities and geological horizons have been shown in text-figure 1 (p. 214).

The classification adopted here is after Romer (*op. cit.*).

The bibliography contains 60 references. With the exceptions of one or two, only those papers are included which have Indian fossil amphibians as the main interest. An index to these references indicating genera and species mentioned there, general references, geological horizons and states has also been appended. The original reference of each species has been indicated by a number in parenthesis after the specific name, which refers to the serial number of entry in the bibliography.

¹ Romer, A. S. 1953. *Vertebrate Paleontology*. Chicago (Uni. Chicago Press).

² La Touche, T. H. D. 1917-1926. *A bibliography of Indian geology, and Physical geography*, 4 parts. Calcutta (Govt. India).



R. K. Ghosh—A Catalogue of Indian Fossil Amphibia.

TEXT-FIG. 1.—Map showing the distribution of the different species of Amphibia so far known from India.

II—LIST OF FOSSIL AMPHIBIANS

| Species | Geological Horizon | Locality |
|---|---|--|
| Superorder LABYRINTHODONTIA | | |
| Order RACHITOMI | | |
| Suborder <i>ERYOPSOIDEA</i> | | |
| Family ARHEGOSAURIDAE | | |
| Genus <i>Arhegosaurus</i> Goldfuss | | |
| 1. <i>Arhegosaurus kashmiriensis</i> Tewari (48) | Upper Carboniferous (Lower Gondwana) | Gangamopteris beds, Risin Spur near Srinagar, Kashmir. |
| 2. <i>Arhegosaurus ornatus</i> S. Woodward (58) | Lower Permian (Lower Gondwana) | Gangamopteris beds, Kunmu, Kashmir. |
| 3. <i>Arhegosaurus</i> sp (58) | Lower Permian (Lower Gondwana) | do |
| 4. <i>Arhegosaurus</i> ? sp (27) | Upper Permian (Lower Gondwana) | Bijori, Madhya Pradesh. |
| Family ERYOPSIDAE | | |
| Genus <i>Actinodon</i> Gandry | | |
| 5. <i>Actinodon risinensis</i> Wadia and Swinton (55) | Permo-Carboniferous (Lower Gondwana) | Gangamopteris beds, near Risin hamlet, c. 2½ Km. E. N. E. of Zewan, Vihi District, Kashmir. 34°4' x 74°56' |

II—LIST OF FOSSIL AMPHIBIANS—*Contd.*

| Species | Geological Horizon | Locality |
|--|---|--|
| Suborder <i>NEORHACHITOMI</i> | | |
| Family <i>RHINESUCHIDAE</i> | | |
| Genus <i>Rhinesuchus</i> | | |
| 6. <i>Rhinesuchus wadai</i> Tripathi (50) | Late Permian (Lower Gondwana, Raniganj Stage) | Marhwas, Sidhi District, Madhya Pradesh. |
| Genus <i>Gondwanosaurus</i> Lydekker (28) | | |
| 7. <i>Gondwanosaurus bijoriensis</i> Lydekker (28) | Upper Permian (Lower Gondwana) | Bijori, Madhya Pradesh. |
| Family <i>CAPITOSAURIDAE</i> | | |
| Genus <i>Mastodonsaurus</i> Jaeger | | |
| 8. <i>Mastodonsaurus indicus</i> Lydekker (32) | Triassic-Jurassic (Middle Gondwana, Rhaetic-Keuper stage) | Denwa River, Satpura District, Madhya Pradesh. |
| 9. <i>Mastodonsaurus</i> sp (21) | Permo-Triassic | Raniganj Coalfield, Bengal. |
| Family <i>TREMATOSAURIDAE</i> | | |
| Genus <i>Gonioglyptus</i> Huxley (21) | | |
| 10. <i>Gonioglyptus longirostris</i> Huxley (21) | Lower Triassic (Middle Gondwana) | Panchet Rocks, Raniganj Coalfield, Bengal. |
| 11. <i>Gonioglyptus hexleyi</i> Lydekker (25) | do | do |
| 12. <i>Gonioglyptus</i> ? sp (25) | do | do |

II—LIST OF FOSSIL AMPHIBIANS—Contd.

| Species | Geological Horizon | Locality |
|---|--|--|
| 13. <i>Gonioglyptus</i> sp (17) Genus <i>Glyptognathus</i> Lydekker (25) | Lower Triassic | Prionolobus beds, Salt Range, Punjab. |
| 14. <i>Glyptognathus fragilis</i> Lydekker (25) Family METOPOSAURIDAE Genus <i>Metoposaurus</i> | Lower Triassic (Middle Gondwana) | Panchet Rocks, Raniganj Coalfield, Bengal. |
| 15. <i>Metoposaurus maleriensis</i> Roy-Chowdhuri (45) | Upper Triassic (Middle Gondwana, Maleri formation) | Achlapur, Pranhita Godavari Valley, Andhra Pradesh. |
| 16. <i>Metoposaurus</i> sp (18) Family BRACHYOPIDAE Genus <i>Brachyops</i> Owen (37) | do | Maleri, Andhra Pradesh. |
| 17. <i>Brachyops laticeps</i> Owen (37) | Lower Triassic (Middle Gondwana) | Near Mangli, c. 80 km. south of Nagpur and c. 56 km. N. W. of Chanda, Maharashtra. |
| 18. ? <i>Brachyops</i> sp (41) Genus <i>Indobrachyops</i> Huene & Sahni (19) | Permo-Triassic | Raniganj Coalfield, Bengal. |
| 19. <i>Indobrachyops panchetensis</i> Huene & Sahni (19) | Lower Trias (Upper Panchets) | Panchet Rocks, Raniganj Coalfield, Bengal. |

II—LIST OF FOSSIL AMPHIBIANS—*Contd.*

| Species | Geological Horizon | Locality |
|--|--|--|
| Genus <i>Pachygonia</i> Huxley | | |
| 20. <i>Pachygonia incurvata</i> Huxley (21) | Lower Triassic (Middle Gondwana) | Panchet Rocks, Raniganj Coalfield near Raniganj, Bengal |
| 21. do (29) | Lower Triassic (Middle Gondwana) | Maleri, Andhra Pradesh. |
| 22. <i>Pachygonia ? incurvata</i> Huxley (25) | Lower Triassic-Upper Jurassic (Gondwana, Kota- Maleri Group) | do |
| Superorder SALIENTIA | | |
| Order ANURA | | |
| Suborder PROCOELA | | |
| Genus <i>Bufo</i> Laurenti | | |
| 23. <i>Bufo cf. melanostictus</i> Schneider (30) | Pleistocene (Cave deposits) | Kurnool, Andhra Pradesh. |
| 24. <i>Bufo</i> sp (12) | Post-Pleistocene | Billa-Surgam, Andhra Pradesh. |
| Genus <i>Indobatrachus</i> Noble (33) | | |
| 25. <i>Indobatrachus pusillus</i> (Owen) (36) | Eocene | Bombay, Maharashtra. |
| 26. <i>Indobatrachus trivalis</i> Chiplonker (7) | Lower Eocene | Worli Hill, Bombay, Maharashtra. |
| 27. <i>Indobatrachus malabaricus</i> Verma (54) | Eocene (Intertrappean beds) | Malabar Hill, Bombay, Maharashtra. |

II—LIST OF FOSSIL AMPHIBIANS—*Contd.*

| Speices | Geological Horizon | Locality |
|---|--|--|
| Suborder <i>DIPLASIOCOELA</i> | | |
| Family RANIDAE | | |
| Genus <i>Rana</i> Linnaeus | | |
| 28. <i>Rana</i> sp (12) | Post Pleistocene | Billa-Surgam, Andhra Pradesh. |
| Some undetermined Labyrinthodont remains : | | |
| (a) Right lateral thoracic plate and vertebrae (11) | Lower Triassic (Middle Gondwana) | Panchet Rocks, Raniganj Coalfield, Bengal. |
| (b) Greater part of the right ramous of mandible (24) | do | do |
| (c) Skull of Labyrinthodont (52) | do | do |
| (d) Lower jaw (symphysis) (25) | do | do |
| (e) Humerus (52) | do | do |
| (f) Disarticulated bones (52) | do | do |
| (g) Limb bones (43) | do | do |
| (h) Maxilla (29) | Upper Triassic (Middle Gondwana, Denwa Group). | Dinwa River, Satpura, Madhya Pradesh. |
| (i) Fragment of mandible (43) | Upper Triassic-Middle Jurassic (Gondwana, Kota- Maleri Group). | Andhra Pradesh. |
| (j) Vertebrae (25). | Upper Triassic (Middle Gondwana, Maleri Group). | do |

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VI—SUMMARY

All the known Indian fossil amphibian species together with some unidentified material as reported in literature have been listed. Under the bibliography 60 references, mainly dealing with Indian fossil amphibians, are given.