**Matrix of morphological characters**

Character states scored 0–3, polymorphic [x y], inapplicable (-) or unknown (?).

*Opisthacanthus\_laevipes* 0000100010111----01010100100011100010-000-0000010-2200--0120000110000100-0020100221000001110000000010000000000011000111100000020011010101-010

*Chiromachus\_ochropus* 1000102000001----1-000000101011100010-112000000010001110100000010000113101030000220000101111000101110000000001000000112000011--0011010001-111

*Iomachus\_laeviceps* 010010211100011101-000100000001100010-000-1--1--0-1110--0100000100001121000000002210000101000000000000000000011--000112100011--1111000001-101

*Iomachus\_malabarensis* 010010211100001101-000100100001100010-000-0000000-0010--0100000100001121000000002210000001000000000000000000011--000112100011--1111000001-101

*Iomachus\_nitidus* 000010211100011101-000100000001100010-000-1--1--0-1110--0100000100001121000000002210000101010000000000000000011--000212100011--1111000001-101

*Iomachus\_politus* 110010210000000111-1000000000000-0100-100-011001112210-10000100101000021000000001201000101000000000000000000001--01--12011200002000010001-011

*Iomachus\_punctulatus* 000010100100011101-000100100001100010-100-1--1--0-1110--01000001000011[1 2]100000000221000010100000000000000000001100000112?????????????????????1

*Opisthacanthus\_cayaporum* 100110200110001101-001100000000110000-01210000001122110000110000000001[0 2]1110300012211001011000000000000000000011--000112011200002000010001-011

*Opisthacanthus\_elatus* 1001101001100011001000200000011210001001210000001122110000010000000001[0 2]1110300002211011011000000000000000000011--000112011200002000010001-011

*Opisthacanthus\_lecomtei* 1001102000101----00010000101011120000-100-011001112210--00000000010001[0 2]1000000001201000101000000000000000000011--000112111100002000010001-011

*Opisthacanthus\_madagascariensis* 0000101110000001001010100111011100010-000-000000110010--1100001-000001[1 3]100010000220000000011000000000000000001001000112100011--3011012-01-111

*Palaeocheloctonus\_pauliani* 000010211000001101-0101001100011000111000-0000000-0010--0100001-0000013100010000110000000101000000000000000001001001-12100011--3011012-01-111

*Hormiops\_davidovi* 0100003121000001101010100010000100000-100-[0 2]00[0 2]000-221[0 1]0-0000000001101021011311101201000100101110001110100220011--0000021100101241111111000011

*Hormiops\_infulcra* 0100003121000001101010100010000100000-000-2--2--0-2210--0000000001101021011311101211000100101110001110100220011--0000020110102241111111000011

*Liocheles\_australasiae* 000010302100001101-010100100001100010-000-0000000-2211100000000001101021011311101201001101100000011121101220011--1000121110102241112111000011

*Liocheles\_longimanus* 000010302100001111-010100000000100010-000-0000000-2211100000000000101021011311101201001101000000001120101220011--1000121110102241112111000011

*Liocheles\_nigripes* 000010002100010101-110101100001100010-000-0000020-2211100000000000101021010311101201001101100000001120111220011--1000120110102241112111000011

*Hormurus\_boholiensis* 0000103022-0001101-0102001011112110110000-0000000-2211100001000001301021010311101201001101000000000011000220011--001-121110102241111111001011

*Hormurus\_ischnoryctes* 0000103021-0010011-0102101111112110111000-0000000-2211100000000001301021010311101201001101010000000010000110011--0001121110102241111111100011

*Hormurus\_karschii* 0000103022-000111010102101111112120110000-0010000-2211100000000101301021010311111201001111010000000010000100011--001-121111102141110111101011

*Hormurus\_litodactylus* 0000103022-0001111-0102101111112120110000-2--2--0-2210--0000000001201021010311102211001101010000000010000100011--0002121110102241111111001011

*Hormurus\_longimanus* 000010302100001111-0102001111112110111000-0010110-2210--0000000001201021010311101211001101010000001110010110011--0001121110102241111111001011

*Hormurus\_macrochela* 0000103022-0001111-0102101111112120111000-0000000-2211100000000101301021010311101201001101010000000010000110011--0001121110102241111111101011

*Hormurus\_neocaledonicus* 0001103022-0011101-0102001111112110111001-0000000-2211000000000001201021010311101201001101000000001121000221011--001-121110102241111111001011

*Hormurus\_ochyroscapter* 000010302100010001-0102011111112110111000-0000000-2211100001000101201021010311101201001101010000000010000111111--0001121110102241111111101011

*Hormurus\_penta* 000110302100001?01-0101001110111000111001-000000--??1110?0000100012110210103????1?00?01[1 2]01000000101120000220011--0001121110102241111111001011

*Hormurus\_polisorum* 001-01302100001111-0102101111111011111000-0010010-2211000000000101301021010311101200011101010000000000000000011--001-121100102141111111001011

*Hormurus\_waigiensis* 0000103022-0001111-0102001111112120110000-0000000-2211100000000101201021010311101201001101010000000010000110011--0001121110102241111111001011