

The taxonomic history of the enigmatic Papuan snake genus *Toxicocalamus*  
(Elapidae: Hydrophiinae), with the description of a new species from the  
Managalas Plateau of Oro Province, Papua New Guinea, and a revised  
dichotomous key

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**Supplementary material**

**Appendix S1. Comparative material** ( $n = 489$ )

*Toxicocalamus buergersi* ( $n = 6$ ): PAPUA NEW GUINEA, EAST SEPIK PROVINCE: Wewak (elev. 200 m; 03°40' S, 143°05' E), AMNH R-75001, 75236; Maprik (elev. 195 m; 03°39' S, 143°02' E), AM R.120360, 129231. “Deutsch Neuguinea” [German New Guinea]: no further locality, ZMB 25232 (holotype). SANDAUN PROVINCE: Kumnatei (elev. 634 m; 03°27' S, 142°05' E) IRSNB 18736.

*Toxicocalamus cratermontanus* ( $n = 1$ ): PAPUA NEW GUINEA, SIMBU PROVINCE: Haia, Crater Mountain Wildlife Management Area (elev. 920 m; 06°43' S, 145°05' E), USNM 562941.

*Toxicocalamus ernstmayri* ( $n = 1$ ): PAPUA NEW GUINEA, WESTERN PROVINCE: Wangbin (elev. 1468 m; 5°14' S, 141°16' E), MCZ R-145946 (holotype).

*Toxicocalamus grandis* ( $n = 1$ ): INDONESIA, Papua Province: “Launch camp,” Setakwa River (elev. 25 m; 04°45' S, 137°20' E), BMNH 1946.1.16.34 (holotype).

*Toxicocalamus holopelturus* ( $n = 17$ ): PAPUA NEW GUINEA, MILNE BAY PROVINCE: Rossel Is., Louisiade Archipelago, Mt. Rossel (elev. 205–700 m; 11°20' S, 154°13' E), AMNH R-76660 (holotype), BPBM 20823–33, PNGM 25194; Cheme (elev. 55 m; 11°19' S, 154°14' E), BPBM 20835–36; Mount Yuvu (elev. 450 m; 11°22' S, 154°06' E), MCZ R-156548; Gobubob (elev. 336 m; 11°21' S, 154°09' E), PNGM 25193.

*Toxicocalamus longissimus* ( $n = 17$ ): PAPUA NEW GUINEA, MILNE BAY PROVINCE: Woodlark Island without precise locality data, (elev. n/a; 09°13' S, 152°56' E), BMNH 1946.1.18.92–93 (lectotype, paralectotype); Guasopa (elev. 12 m; 09°13' S, 152°56' E), AM R.124858, 124904, BPBM 17885–87; Kulumandau (elev. 53 m; 09°05' S, 152°43' E), AMNH R-76619, 76629–30, BPBM 42185; Suloga Harbour (elev. 80 m; 09°12' S, 152°44' E), BPBM 17888; Waimunon Bay (elev. 72 m; 09°04' S, 152°50' E), BPBM 39702; Dikoias (elev. 73 m; 09°02' S, 152°45' E), BPBM 42183–84; Fergusson Island (probably in error, *fide* O'Shea & Kaiser, *in prep.*), no further locality data, BMNH 1904.11.1.60. No locality data, AM R.46845.

*Toxicocalamus loriae sensu lato* ( $n = 312$ ): PAPUA NEW GUINEA, CENTRAL PROVINCE: Haveri, Owen Stanley Range (elev. 700 m; 09°25' S, 147°35' E), MSNG 29141 (holotype of *Apistocalamus loriae*); Dinawa, Owen Stanley Range (elev. 1220 m; 08°35' S, 145°55' E), BMNH 1946.1.14.53 (holotype of *Apistocalamus pratti*); Mafulu, Owen Stanley Range (elev. 1270 m; 08°30' S, 147°04' E), AMNH R-59067, BMNH 1935.5.10.174; Fane to Bellavista road, Owen Stanley Range (elev. 1065 m; 08°32' S, 147°05' E), PNGM 23158; Tapini, Owen Stanley Range (elev. 950 m; 08°21' S, 146°59' E), USNM 195619; Owers Corner, Owen Stanley Range (elev. 620 m; 09°21' S, 147°29' E), MCZ R-150803; Siruohu and Mabiri stream, Mount Obree (elev. 1550 m; 09°26' S, 140°00' E), BPBM 19503–04; Laronu (elev. 900 m; 09°26' S, 147°59' E), BPBM 19502, 19505–06. MILNE BAY PROVINCE: Bunisi, Mount Simpson (elev. 1490 m; 10°01' S, 149°36' E), BPBM 17989, 18164, 18166; Siyomu, Mount Simpson (elev. 1300 m; 10°01' S, 149°35' E), BPBM 17987–88, 18165, 30638; Agaun, Mount Dayman (elev. 1014 m; 09°55' S, 149°20' E), PNGM 24649A–B, UPNG 4840; Dumae Creek, West Agaun, Mount Dayman (elev. 1200 m; 09°53' S, 149°19' E), BPBM 10966–67; Bonenau (elev. 1340 m; 09°53'

S, 149°24' E), UPNG 7105, 7107–08; Mai-iu River (elev. 428 m; 09°41' S, 149°16' E), UPNG 3526. ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36169, 36171; Umwate, Itokama, (elev. 943 m; 09°16' S, 148°16' E), BPBM 43028–29, 43032; Akupe Camp, Itokama (elev. 723 m; 09°17' S, 148°16' E), BPBM 43027; Mount Trafalgar, Cape Nelson (elev. 187 m; 09°13' S, 149°09' E), BPBM 39813; Isurava, Kokoda Trail (elev. 1260 m; 08°59' S, 147°44' E), BPBM 44892; Eora Creek, Kokoda Trail (elev. 1800 m; 00°02' S, 147°44' E), BPBM 44893; Kokoda Trail, no further locality data, PNGM 22762; 'Popondetta' (elev. 106 m; 08°46' S, 148°14' E), AMNH R-111810, MCZ R-141009; Imanaturu, Mt. Lamington (08°54' S, 148°12' E), AM R.9351–52, 61027 (holotype and paratypes of *Apisthocalamus lamingtoni*), AM R.9851. MOROBE PROVINCE: Garaina (elev. 770 m; 07°53' S, 147°08' E), MCZ R-152432; Saurere, West Garaina (elev. 1440 m; 07°55' S, 147°05' E), PNGM 22767; Saiko (elev. 1870 m; 07°57' S, 147°03' E), BPBM 41381, 41390; Amu Creek (elev. 1660 m; 07°55' S, 147°02' E), BPBM 41391; Waria Valley (elev. 485 m; 07°48' S, 147°24' E), BPBM 38855; Wau and environs (elev. 1220–2000 m; 07°20' S, 146°43' E), BPBM 17173, 17417, 17451–52, 18217, 23669, 36038, CAS 198320–22, KU 129086, PNGM 24716; Kalolo Creek (elev. 965 m; 07°18' S, 146°43' E), AMNH R-1422887, BPBM 5440, 5442; Hewieni, Kariba River (elev. 1050 m; 07°25' S, 146°25' E), BPBM 17423; Aseki, Watut Valley (elev. 1640 m; 07°20' S, 146°10' E), BPBM 6497; Kwaplalim, West of Menyamya, Tauri River (elev. 1500 m; 07°11' S, 145°58' E), UCM 51552–53, NMW 37670; Zenag, Markham Valley (elev. 940 m; 06°57' S, 146°37' E), AMNH R-85744; Sattelberg, Huon Peninsula (elev. 800 m; 06°29' S, 147°47' E), BMNH 1946.1.17.57 MCZ R-76627–28, UPSZ 2387 (syntypes of *Pseudapistocalamus nymani*); Masba Creek, Huon Peninsula (elev. 760 m; 06°29' S, 147°31' E), AMNH R-95579–80; Mount Rawlinson, Huon Peninsula (elev. 1340 m; 06°31' S, 147°16' E), AMNH R-95581; Pindui and

environs, Huon Peninsula (elev. 790 m; 06°17' S, 147°18' E), AMNH R-95578, 95582; Boana, Huon Peninsula (elev. 1020 m; 06°25' S, 146°50' E), CAS 113668; Tuwop, Sarawaget Range, Huon Peninsula (elev. 1350 m; 06°21' S, 146°55' E), BPBM 3397, 3399; Lialun, Huon Peninsula (elev. 116 m; 06°06' S, 147°36' E), ZMB 24343–44, 78770–71. MADANG PROVINCE: Maibang (elev. 436 m; 05°38' S, 146°18' E), IRSNB 7336678; Astrolabe Bay (elev. 116 m; 05°22' S, 145°39' E), NMW 27383.1–2; Wanang (elev. 120 m; 05°15' S, 145°16' E), BPBM 31257; Bundi (elev. 1150 m; 05°44' S, 145°14' E), AM R.124482, Kalne River, Bismarck Range (elev. 1200 m; 05°31' S, 144°49' E), UPNG 8695; Kaironk, Kaironk Valley Schrader Range (elev. 1850 m; 05°14' S, 144°29' E), UPNG 963–67, 3353, 5012; Fungoi, Kaironk Valley Schrader Range (elev. 1800 m; 05°14' S, 144°29' E), AM R.23068–69, 23071–72; Matatambu, Adelbert Range (elev. 1140 m; 04°36' S, 145°54' E), UPNG 8695; Miak, Karkar Island (elev. 39 m; 04°36' S, 145°54' E), AM R.25236, 25304, 25752; Mom, Karkar Island (elev. 61 m; 04°38' S, 145°53' E), AM R.25608. EASTERN HIGHLANDS PROVINCE: Wonenara, Yaiya Valley (elev. 1650 m; 06°48' S, 145°53' E), UPNG 1213–18; Agakamatasa (elev. 1720 m; 06°43' S, 145°37' E), MCZ R-121545; Lida Patrol Post (elev. 1800 m; 06°19' S, 145°23' E), CAS 139575; Nivi Unggai (elev. 2030 m; 06°13' S, 145°18' E), MCZ R-84142, 116791–92; Lufa, Mount Michael (elev. 1120 m; 06°20' S, 145°15' E), CAS 113666–67, MCZ R-121546. SIMBU PROVINCE: Noru, Tua River, Karimui Plateau (elev. 1110 m; 06°30' S, 144°50' E), AM R.115365; Karimui, Karimui Plateau (elev. 1770 m; 05°59' S, 144°55' E), CAS 118961-62; Igindi, Suai Mountains (elev. 1630 m; 06°11' S, 144°58' E), AMNH R-98134; Kebil, Wahgi Valley (elev. 1944 m; 06°10' S, 145°01' E), MCZ R-85050; Kundiawa, Wahgi Valley (elev. 1585 m; 06°01' S, 144°58' E), AMNH R-98495–98, 103902, CAS 99916, 100069, 113669–71, 115986–6013, 118946–56, 118956, 118960, 139584, 140034–44, MCZ R-83218, 84026, 84143–44, 111764–90, 115586, 116774–

88, 123883–86, 140818–19, 145923, NMV 13421, PNGM 864, 882, 24585–86, SAMA R9526, USNM 166280; Mintima, Wahgi Valley (elev. 1830 m; 05°58' S, 144°55' E), CAS 118957–59, MCZ R-116789–90; Poral Ras, Wahgi Valley (elev. 1770 m; 05°59' S, 144°55' E), CAS 103374–75, 113663, MCZ R-121547–48; Kondiu, Wahgi Valley (elev. 1600 m; 05°58' S, 144°52' E), AMNH R-75336–57; Kup, Wahgi Valley (elev. 1500 m; 05°57' S, 144°48' E), AMNH R-72780–81; Wahgi River, without precise locality data, CAS 113665–64. Jiwaka Province: Minj, Wahgi Valley (elev. 1560 m; 05°52' S, 144°40' E), MCZ R-141849; Banz, Wahgi Valley (elev. 1650 m; 05°47' S, 144°37' E), AMNH R-85743, 88060, Kimil, Wahgi Valley (elev. 1700 m; 05°43' S, 144°32' E), AM R.14783, 14785–88; Kol, Jimi Valley (elev. 1500 m; 05°42' S, 144°50' E), CAS 140042. WESTERN HIGHLANDS PROVINCE: Korn, Mt Hagen (elev. 1705 m; 05°51' S, 144°18' E), AM R.14771, 14473; Dobel, Mount Hagen (elev. 1705 m; 05°51' S, 144°14' E), PNGM 22160, UPNG 3992, Baiyer River (elev. 1170 m; 05°31' S, 144°10' E), AM R.16575, 16581. SOUTHERN HIGHLANDS PROVINCE: Mendi (elev. 1750 m; 06°08' S, 143°39' E), CAS 113664, MCZ R-121543–44; Halalinja, Waga River (elev. 2140 m; 06°09' S, 143°22' E), BMNH 1976.92; Nipa (elev. 2070 m; 06°06' S, 143°15' E), UPNG 5811; Moro Camp, Lake Kutubu (elev. 840 m; 06°21' S, 143°13' E), SAMA 69950; Bobole (elev. 1145 m; 06°12' S, 142°46' E), AM R.122803, 122806. SANDAUN PROVINCE: Busilmin, Star Mountains (elev. 1880 m; 04°55' S, 141°12' E), SAMA R.6275. “Neuguinea” [New Guinea], no further locality, NMW 27382.1–2. “Deutsch Neuguinea” [German New Guinea], no further locality, ZMB 23533, ZSM 244/1926. INDONESIA, WEST PAPUA PROVINCE: Fak Fak Peninsula (elev. 518 m; 02°57' S, 132°35' E), BMNH 1946.1.18.24–26, MCZ R-76634 (holotype and paratypes of *Apistocalamus loennbergii*). “New Guinea,” no further locality, MZB 361. No locality data, AM R.46844.

*Toxicocalamus mintoni* ( $n = 1$ ): PAPUA NEW GUINEA, MILNE BAY PROVINCE: Mount Riu, Sudest Island, Louisiade Archipelago (elev. 410 m; 11°29' S, 153°25' E), BPBM 20822 (holotype).

*Toxicocalamus misimae* ( $n = 6$ ): PAPUA NEW GUINEA, CENTRAL PROVINCE: Mekeo Region (09°00' S, 146°50' E), (probably in error, *fide* O'Shea & Kaiser, *in prep.*), AM R.7614. MILNE BAY PROVINCE: Umuna Mine, Misima Island, Louisiade Archipelago, (elev. 130 m; 10°40' S, 152°48' E), AM R.125026; Mararoa, Mount Sisa, Misima Island, Louisiade Archipelago, (elev. 350 m; 10°39' S, 152°48' E), AMNH R-76684 (holotype); Misima Mine, Misima Island, Louisiade Archipelago, (elev. 180 m; 10°39' S, 152°47' E), SAMA 69921; Bulai Plantation, Misima Islands, Louisiade Archipelago, (elev. 180 m; 10°39' S, 152°45' E), SAMA 69924; Bagilina, Mt. Oia-Tau, Misima Island, Louisiade Archipelago, (elev. 128 m; 10°39' S, 152°48' E), BPBM 17231.

*Toxicocalamus nigrescens* ( $n = 2$ ): PAPUA NEW GUINEA, MILNE BAY PROVINCE: Basima, Fergusson Island, d'Entrecasteaux Archipelago (elev. 10 m; 09°28' S, 150°50' E), BPBM 16544; Oya Waka, Fergusson Island, d'Entrecasteaux Archipelago (elev. 990 m; 09°27' S, 150°33' E), BPBM 16545.

*Toxicocalamus pachysomus* ( $n = 1$ ): PAPUA NEW GUINEA, MILNE BAY PROVINCE: Gadowalai, Cloudy Mountains (elev. 715 m; 10°29' S, 150°14' E), BPBM 15771 (holotype).

*Toxicocalamus preussi* ( $n = 59$ ): PAPUA NEW GUINEA, SIMBU PROVINCE: Crater Mountain (elev. 2325 m; 06°35' S, 145°05' E), BPBM 17449; Haia (elev. 908 m; 06°43' S, 145°05' E), USNM 562943–44. GULF PROVINCE: Weiana, Pio River (elev. 444 m; 06°45' S, 144°52' E), CAS 118945; Wabo (elev. 400 m; 06°54' S, 145°03' E), USNM 562942; Koni (= Pawaia No. 2), Purari River (elev. 76 m; 07°15' S, 145°20' E), MCZ R-102176; Middletown, Kikori River (elev. 63 m; 07°16' S, 144°09' E), MCZ R-59090; Kopi Camp, Kikori River (elev. 22 m; 07°19' S, 144°11' E), SAMA 69947–48; NW of Kikori, Kikori River (elev. 37 m; 07°10' S, 144°05' E), MCZ R-150804. SOUTHERN HIGHLANDS PROVINCE: Waro, Hegigio River (elev. 470 m; 06°32' S, 143°11' E), AM R.122811–12; Fogamaiyu, Hegigio River (elev. 230 m; 06°31' S, 143°05' E), AM R.122805; Didessa, Mt. Bosavi (elev. 1885 m; 06°34' S, 142°50' E), ZSM 19/1966; Namosado, Mt. Sisa (elev. 870 m; 06°15' S, 142°47' E), AM R.122808. WESTERN PROVINCE: south of Palmer Junction, Strickland River (elev. 65 m; 05°54' S, 141°32' E), AMNH R-57511–12 (holotype and paratype of *Ultrocalamus preussi angusticinctus*); Matkomrae, Ok Tedi (elev. 82 m; 05°49' S, 141°09' E), MCZ R-121551, 141008; Ningerum, Ok Tedi (elev. 86 m; 05°41' S, 141°08' E), MCZ R-140989, 141007, PNGM 22159, USNM 217500; Tabubil, Ok Tedi (elev. 457 m; 05°15' S, 141°12' E), AM R.127468, UPNG 5665; Olsobip, Fly River (elev. 612 m; 05°23' S, 141°31' E), PNGM 24584, UPNG 1613, Kataw (= Binaturi River), Southern Trans-Fly (probably in error, *fide* O'Shea & Kaiser, *in prep.*) (elev. 0 m; 09°08' S, 142°57' E), MSNG 54100. EAST SEPIK PROVINCE: Wewak (elev. 53 m; 03°35' S, 143°38' E), AM R.95600. SANDAUN PROVINCE: Berlinhafen, Seleo Island (elev. 13 m; 03°08' S, 142°29' E), ZMB 23948 (holotype of *Ultrocalamus preussi*); Mount Sapau, Torricelli Range (elev. 1300 m; 03°22' S, 142°31' E), BPBM 23456; Parkop, Mt Sapau, Torricelli Range Range (elev. 560 m; 03°23' S, 142°31' E), AM R.115505; Wilbeite (elev. 866 m; 03°25' S, 142°07' E), AM R.136279; Mt.



Boobiari (elev. 400 m; 04°35' S, 141°10' E), AM R.115507; Enemb River (elev. 550 m; 03°16' S, 141°11' E), AM R.135501; Njao, Tjano River (elev. 450 m; 02°48' S, 141°00' E), ZMA.RENA 17733. WEST NEW BRITAIN PROVINCE: Uasilau (questionable) (elev. 117 m; 05°34' S, 150°52' E), IRSNB 18737. INDONESIA, PAPUA PROVINCE: Arso, Tami River (elev. 53 m; 02°56' S, 140°47' E), ZMA.RENA 17734B; Hollandia [= Jayapura], (elev. 100 m; 02°53' S, 140°42' E), FMNH 43030, ZMA.RENA 17735; Upper Sermowai River (elev. 95 m; 02°29' S, 139°50' E), UIMNH 19199, ZMA.RENA 17736A–C; Etik, Biri River (elev. 140 m; 02°17' S, 139°08' E), MZB 5090, ZMA.RENA 17734A; SW of Bernard Camp, Idenberg River (elev. 800–850 m; 03°30' S, 139°09' E), AMNH R-62469–72; Prauwenbivak, Idenberg River (elev. 40 m; 02°25' S, 139°10' E), MZB 354, 5089, ZMA.RENA 17731; Albatrosbivak, Mamberamo River (elev. 40 m; 02°09' S, 137°52' E), MZB 356, 5054–56; Pionierbivak, Mamberamo River (elev. 10 m; 02°04' S, 137°50' E), ZMA.RENA 17732; Mamberamo River (elev. 20 m; 01°55' S, 137°50' E), MZB 353. No locality data, AM R.46847.

*Toxicocalamus pumehanae* ( $n = 1$ ) PAPUA NEW GUINEA, ORO PROVINCE: Jarefa Camp, Itokama (elev. 820 m; 09°12'19" S, 148°14'15" E) BPBM 36185.

*Toxicocalamus spilolepidotus* ( $n = 2$ ): PAPUA NEW GUINEA, Eastern Highlands Province: Purosa, Okapa (elev. 1740 m; 06°40' S, 145°33' E), AMNH R-85745 (holotype); Yaiya Valley, Kratke Mountains (elev. 1500 m; 07°00' S, 145°49' E), PNGM 21332.

*Toxicocalamus stanleyanus* ( $n = 42$ ): PAPUA NEW GUINEA, CENTRAL PROVINCE: Dinawa, Owen Stanley Range (elev. 840 m; 08°35' S, 146°55' E), BMNH 1946.1.7.55 (holotype),

1904.3.17.13; Madew, St. Joseph River, Owen Stanley Range (elev. 1200 m; 08°36' S, 146°55' E), BMNH 1908.10.14.10–12; Mafulu, Owen Stanley Range (elev. 1270 m; 08°30' S, 147°04' E), AMNH R-59063, BMNH 1935.5.10.171–173; Maeaera Plantation (elev. 7 m; 08°40' S, 146°31' E), ZSM 52/2000. GULF PROVINCE: Teduku, Eloa River (elev. 178 m; 07°43' S, 146°29' E), USNM 562945; Middletown, Kikori River (elev. 63 m; 07°16' S, 144°09' E, MCZ R-59059–60, USNM 217499. Unknown locality, UPNG 8737A–B. SIMBU PROVINCE: Camp II, Pio River (elev. 300 m; 06°44' S, 144°52' E), MCZ R-121549; Soliabeda, Ining River (elev. 457 m; 06°41' S, 144°52' E), CAS 118943. SOUTHERN HIGHLANDS PROVINCE: Waro, Hegigio River (elev. 470 m; 06°32' S, 143°11' E), AM R.122809–10; Fogamaiyu, Hegigio River (elev. 230 m; 06°31' S, 143°05' E), AM R.122804; Didessa, Mt. Bosavi (elev. 1885 m; 06°34' S, 142°50' E), ZSM 49–52/2000, 71/2015; Namosado, Mt. Sisa (elev. 870 m; 06°15' S, 142°47' E), AM R.122807. WESTERN PROVINCE: Matkomrae, Ok Tedi (elev. 82 m; 05°49' S, 141°09' E), MCZ R-121550; Ningerum, Ok Tedi (elev. 86 m; 05°41' S, 141°08' E), MCZ R-140988; Derongo, Ok Taub (elev. 615 m; 05°26' S, 141°08' E), CAS 121220. MADANG PROVINCE: Road from Hinihon to Reinduk, Adelbert Range (elev. 1000 m; 04°40' S, 145°22' E), BPBM 5711. EAST SEPIK PROVINCE: Arin (elev. 560 m; 03°33' S, 143°20' E), UPNG 7171. SANDAUN PROVINCE: Mount Nibo, S of Aitape (elev. 208 m; 03°23' S, 142°09' E), AMNH R-100047; Parkop, Mount Sapau, Torricelli Range (elev. 526 m; 03°25' S, 142°31' E), BPBM 223455. INDONESIA, PAPUA PROVINCE: Ingembit, Ok Walimkan (elev. 117 m; 05°38' S, 141°00' E), MZB 1464; Canobivak, Eilanden River (elev. 37 m; 05°14' S, 139°40' E), ZMA.RENA 17682; Beaufort River Camp, Baliem Valley (elev. 64 m; 03°27' S, 139°10' E), RMNH.RENA 4988, 47753–54; Siewa (elev. 80 m; 03°03' S, 136°22' E), MZB 2784. WEST PAPUA PROVINCE: Fak Fak Regency, Bomberai Peninsula (elev. 380–520 m; 02°57' S, 132°35' E), ZMA.RENA 17683. No locality data, AM R.46846, 46848.

*Toxicocalamus* sp. ( $n = 19$ ): PAPUA NEW GUINEA, MILNE BAY PROVINCE: Samarai Island (elev. n/a; 10°37' S, 150°40' E), AM R.5038. MOROBE PROVINCE: Garaina (elev. 770 m; 07°53' S, 147°08' E), AMNH R-95624, 101100–03, 103681, 104084–85, 107203–05; MCZ R-152428–31. MADANG PROVINCE: Fungoi, Kaironk Valley Schrader Range (elev. 1800 m; 05°14' S, 144°29' E), AM R.23073. INDONESIA, PAPUA PROVINCE: Angurruk, Jahûli River (elev. 1450 m; 04°12' S, 139°26' E), ZSM 54/2015, Dingerkon, Eipomek River (elev. 1800 m; 04°27' S, 140°01' E), ZSM 55/2015.

**Appendix S2. Other material examined ( $n = 94$ )**

*Aspidomorphus muelleri* ( $n = 3$ ): PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36168, 36178; Umwate (elev. 943 m; 09°08'13"S, 148°23'13"E), BPBM 43027.

*Aspidomorphus schlegelii* ( $n = 87$ ): PAPUA NEW GUINEA, SANDAUN PROVINCE: Aitape (elev. 15 m; 03°08' S, 142°20' E), AM R.8895; Parkop and environs, Mt. Sapau, Torricelli Range (elev. 420–600 m; 03°25' S, 142°31' E), BPBM 23433–34; Unknown locality AM R.11826, 11896, 133504, BPBM 35967. INDONESIA, PAPUA PROVINCE: Hollandia (= Jayapura) (elev. 20 m; 02°32' S, 140°43' E), RMNH.RENA 45546–47; Bivak Boswezen, Tami River (elev. 15 m; 02°41' S, 140°51' E), RMNH.RENA 45546; Lake Sentani (elev. 90 m; 02°36' S, 140°37' E), RMNH.RENA 6305A–B; Djamna Island (elev. 14 m; 02°00' S, 139°15' E), MCZ R-7080 (holotype of *Pseudelaps muelleri insulae*); Seroie, Yapen Island, Schouten Islands (elev. 30 m; 01°52' S, 135°49' E), RMNH.RENA 45558; Ansus, Yapen Island, Schouten Islands (elev. 18 m;

01°43' S, 136°14' E), NMW 27395/2; Yapen Island without precise locality data, Schouten Islands (elev. n/a; 01°46' S, 136°13' E), RMNH.RENA 6309, 45525, 45528; Biak Island, Schouten Islands (elev. 100 m; 01°10' S, 136°04' E), RMNH.RENA 45560; Numfoor Island, Schouten Islands (elev. 90 m; 01°01' S, 134°53' E), NMW 27390/4–5, 27392/3–4; Merauke (probably in error) (elev. 20 m; 08°27' S, 140°25' E), MNV D.7574. WEST PAPUA PROVINCE: Lobo, Triton Bay (elev. 57 m; 03°44' S, 134°06' E), RMNH.RENA 1403 (syntype of *Elaps muelleri*); Wasior, Wandammen Bay (elev. 130 m; 02°43' S, 134°30' E), NRM 17810; Tamarome (elev. 52 m; 02°49' S, 133°38' E), RMNH.RENA 5107; Babo, Bintuni Bay (elev. 27 m; 02°32' S, 133°25' E), RMNH.RENA 6742A–B; Fak Fak Regency, Bomberai Peninsula (elev. 380–520 m; 02°57' S, 132°35' E), MCZ R-7311, RMNH.RENA 6306A–B, NMW 23489 (holotype of *Pseudelaps muelleri concolor*); “Jack Jack” (= Fak Fak?) NMW 27390/4–5; 10 km NE Steenkool, Vogelkop (elev. 130 m; 02°03' S, 134°05' E), NRM 17801; Manokwari, Vogelkop (elev. 10 m; 00°52' S, 133°25' E), RMNH.RENA 45541–45, 45566–69; Pasir Poetih, Manokwari, Vogelkop (elev. 25 m; 00°52' S, 134°05' E), RMNH.RENA 45570–72; Mansinam Island (sealevel; 00°54' S, 134°05' E), NMW 27390/2–3; Ajamaroe, Vogelkop (elev. 335 m; 01°16' S, 132°10' E), RMNH.RENA 45562–63, 45577; Atinyu, Lake Danau, Vogelkop (elev. 235 m; 01°26' S, 132°023' E), NRM 17809, 17812; Kamboeaja, Vogelkop (elev. 326 m; 01°17' S, 132°14' E), RMNH.RENA 45573–74; Vogelkop without precise locality (elev. n/a; 01°15' S, 132°50' E), RMNH.RENA 45514–17, 45521–23, 45526–27, 45530–40, 45556–57; Salawati Island, Raja Ampat Islands (elev. n/a; 01°07' S, 130°52' E), MCZ R-38967, RMNH.RENA 6307A–B; Batanta Island, Raja Ampat Islands (elev. n/a; 00°050' S, 130°39' E), RMNH.RENA 6308; Waigeo Island, Raja Ampat Islands (elev. n/a; 00°11' S, 130°39' E), RMNH.RENA 5623;

Misool Island, Raja Ampat Islands (elev. n/a; 01°53' S, 130°05' E), BMNH 1946.1.18.43 (holotype of *Aspidomorphus schlegelii*). West New Guinea without locality data, IRSNB 11701.

*Micropechis ikaheka* ( $n = 5$ ): PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36146, 36148, 43083; Druze Guest House, Itokama (elev. 766 m; 09°12' S, 148°15' E), BPBM 43012; Jarefa Camp, Itokama (elev. 820 m; 09°12' S, 148°14' E), BPBM 36187.

### **Appendix S3. Non-elapid snakes recorded in the vicinity of Itokama ( $n = 73$ )**

*Indotyphlops braminus* ( $n = 8$ ) PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36170, 36173–74, 36177, 36178, 36181, unregistered [AA 19828 ]; Druze Guest House, Itokama (elev. 766 m; 09°12' S, 148°15' E), BPBM 43021.

*Ramphotyphlops* sp. ( $n = 6$ ) PAPUA NEW GUINEA, ORO PROVINCE: Jarefa Camp, Itokama (elev. 820 m; 09°12' S, 148°14' E), unregistered [AA 19781]).

*Gerrhopilus inornatus* ( $n = 1$ ) PAPUA NEW GUINEA, ORO PROVINCE: Afore (elev. 673 m; 09°08'13"S, 148°23'13"E), MCZ R-140724.

*Candoia aspera schmidti* ( $n = 6$ ) PAPUA NEW GUINEA, ORO PROVINCE: Umwate (elev. 943 m; 09°08' S, 148°23'E), BPBM 42996–97, 43000; Akupe Camp (elev. 723 m; 09°08' S, 148°23'E), BPBM 42995, 42998–99.

*Candoia paulsoni macdowelli* ( $n = 4$ ) PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36175; Umwate (elev. 943 m; 09°08' S, 148°23'E), BPBM 43006–08.

*Candoia* sp. ( $n = 1$ ) PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), unregistered [AA 19781].

*Morelia viridis* ( $n = 11$ ) PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36143, 36149, 36182–83; Umwate (elev. 943 m; 09°08' S, 148°23'E), BPBM 43014–20.

*Simalia amethystina* ( $n = 1$ ) PAPUA NEW GUINEA, ORO PROVINCE: Druze Guest House, Itokama (elev. 766 m; 09°12' S, 148°15' E), BPBM 43013.

*Boiga irregularis* ( $n = 5$ ) PAPUA NEW GUINEA, ORO PROVINCE: Umwate (elev. 943 m; 09°08' S, 148°23' E), BPBM 43001–02, 43004; Jarefa Camp, Itokama (elev. 820 m; 09°12' S, 148°14' E), unregistered [AA 19983]; Kamua (elev. 722 m; 09°17' S, 148°17' E), BPBM 43003.

*Dendrelaphis* sp. ( $n = 5$ ) PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36180; Jarefa Camp, Itokama (elev. 820 m; 09°12' S, 148°14' E), BPBM 36186, unregistered [AA 18389]; Druze Guest House, Itokama (elev. 766 m; 09°12' S, 148°15' E), BPBM 43011; Akupe Camp (elev. 723 m; 09°08' S, 148°23' E), BPBM 43010.

*Stegonotus* sp. ( $n = 12$ ) PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36144–45, 36169, 36171, unregistered [AA 19701, 19657, 19884]); Jarefa Camp, Itokama (elev. 820 m; 09°12' S, 148°14' E), BPBM 36142, 36189; Umwate (elev. 943 m; 09°08' S, 148°23' E), BPBM 43030–31, 43033.

*Tropidonophis multiscutallatus* ( $n = 1$ ) PAPUA NEW GUINEA, ORO PROVINCE: Afore (elev. 673 m; 09°08' S, 148°23' E), MCZ R-139414.

*Tropidonophis* sp. ( $n = 14$ ) PAPUA NEW GUINEA, ORO PROVINCE: Itokama (elev. 780 m; 09°12' S, 148°16' E), BPBM 36167, 36172, unregistered [AA 19905, 19556]); Jarefa Camp, Itokama (elev. 820 m; 09°12' S, 148°14' E), BPBM 36176, 36184, 36188; Druze Guest House, Itokama (elev. 766 m; 09°12' S, 148°15' E), BPBM 42988–89; Akupe Camp (elev. 723 m; 09°08' S, 148°23' E), BPBM 42987, 42993; Umwate (elev. 943 m; 09°08' S, 148°23' E), BPBM 42986, 42992, 42994.

**Figure S1.** Habitat at the type locality for *Toxicocalamus pumehanae* sp. nov. near Jarefa Camp, Itokama, Oro Province, Papua New Guinea. Photo by Allen Allison.

