Supplementary Information

Conservation Status Assessments of Species-rich Tropical Taxa in the Face of Data Availability Limitations: Insights from Sulawesi *Begonia*

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Supplementary Information Table 1. Occurrence data, geographic ranges (EOO, AOO), area of habitat (AOH) and proposed IUCN assessments.

	Herbarium specimens [#]	**Observations** [#]	**Occurrences recorded** [#]	**Point localities used in analyses** [#]	**EOO** [km^2]	**AOO** [km^2]	**Locations** [#]	**AOH1** [km^2]	**AOH2** [km^2]	**IUCN assessment** [category]	**IUCN assessment** [criterion and conditions]
B. aptera	151	7	121	102	708948	352	30-40	150231	--	LC	
B. balgooyi	4	0	4	4	2680	16	3	2322	197	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. batusangiensis	4	0	4	4	8*	8	1	0.6	0.6	CR	B1ab(iii)+2ab(iii)
B. bonthainensis	12	0	12	10	73	28	1	53	--	CR	B1ab(i,ii,iii)
B. capituliformis	6	0	6	6	1354	16	3	700	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. carnosa	4	0	4	2	8*	8	2	4.5	--	EN	B1ab(iii)+2ab(iii)
B. celebica	16	0	16	15	899	24	3	732	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. chiasmogyna	6	0	6	6	1417	20	3	589	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. comestibilis	13	0	13	11	23708	28	4	14013	--	EN	B2ab(i,ii,iii)
B. cuneatifolia	5	0	4	3	21720	12	3	6049	--	EN	B2ab(i,ii,iii)

B. didyma	3	0	3	3	73	12	1	49	--	CR	B1ab(i,ii,iii)
B. enoplocampa	3	0	2	1	4*	4	1	3.6	--	CR	B1ab(iii)+2ab(iii)
B. flacca	20	0	20	17	16236	32	8	2699	813	VU	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. gambutensis	4	0	3	2	8*	8	2	4	--	EN	B1ab(iii)+2ab(iii)
B. gemella	4	0	2	2	4*	4	1	3	2.4	CR	B1ab(iii)+2ab(iii)
B. guttapila	1	0	1	1	4*	4	1	0.3	--	CR	B1ab(iii)+2ab(iii)
B. hekensis	5	0	5	5	12*	12	1	7.7	--	CR	B1ab(i,ii,iii)
B. hispidissima	5	1	5	5	12*	12	1	5.5	--	CR	B1ab(i,ii,iii)
B. hooveriana	19	7	24	24	10490	80	7	7814	146	VU	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. humilicaulis	1	0	1	0	--	--	--	--	--	DD	
B. ignita	1	0	1	0	--	--	--	--	--	DD	
B. imperfecta	1	0	1	1	--	--	--	--	--	DD	
B. incudiformicarpa	5	0	3	2	8*	8	2	3.8	6.2	EN	B1ab(iii)+2ab(iii)
B. insueta	1	0	1	1	4*	4	1	0.4	--	CR	B1ab(iii)+2ab(iii)
B. insularum	2	3	5	5	20*	20	1	20	--	CR	B1ab(i,ii,iii)
B. iskandariana	7	0	6	3	51	12	1	39	15	CR	B1ab(i,ii,iii)
B. johntanii	1	0	1	1	4*	4	1	0.4	--	CR	B1ab(iii)+2ab(iii)
B. kabaenensis	1	0	1	1	4*	4	1	0.6	0.6	CR	B1ab(iii)+2ab(iii)
B. kinhoi	4	0	4	4	79	12	2	69	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. labengkiensis	3	0	3	3	4*	4	1	1.8	1.9	VU	D2
B. lasioura	4	0	4	4	37	12	2	27	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. mabberleyana	6	0	5	5	73	12	2	11	28	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. macintyreana	3	0	2	2	4*	4	1	2.6	--	CR	B1ab(iii)+2ab(iii)
B. masarangensis	4	0	4	4	12*	12	1	8.4	--	CR	B1ab(i,ii,iii)
B. matarombeoensis	4	3	7	7	313	24	2	99	105	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. mattampensis	3	0	3	2	4*	4	1	0	0	CR	B1ab(iii)+2ab(iii)
B. medicinalis	3	0	2	2	8*	8	2	5.6	--	EN	B1ab(iii)+2ab(iii)
B. mekonggensis	16	0	14	14	9669	48	4	2319	--	VU	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. mendumiae	15	0	14	14	66842	52	10	9398	--	LC	
B. nobmanniae	4	0	4	4	12*	12	1	6.2	--	CR	B1ab(i,ii,iii)
B. ozotothrix	23	3	24	18	84383	56	8	18562	7265	LC	
B. pitopangii	1	0	1	1	4*	4	1	1.3	--	CR	B1ab(iii)+2ab(iii)
B. prionota	9	0	9	9	73	20	2	26	5	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. rachmatii	11	0	10	10	589	24	3	390	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. ranoposoensis	9	0	9	9	1844	28	2	968	899	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. rantemarioensis	10	1	11	8	35	20	1	30	--	CR	B1ab(i,ii,iii)
B. rieckei	219	4	150	60	5205503	220	30-40	50482 6	--	LC	
B. robusta	79	0	39	39	550652	68	11	2187	--	LC	

B. rolandfadlii	1	0	1	1	4*	4	1	1.3	--	CR	B1ab(iii)+2ab(iii)
B. sanguineopilosa	8	0	8	8	12*	12	1	9.8	--	CR	B1ab(i,ii,iii)
B. sarasinorum	6	0	6	5	8*	8	1	1.6	--	CR	B1ab(iii)+2ab(iii)
B. siccacaudata	20	7	24	22	888	60	4	270	319	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. sidolensis	1	0	1	1	4*	4	1	4	--	VU	D2
B. siregarii	6	0	6	6	14	12	1	0.3	6	CR	B1ab(i,ii,iii)
B. sojolensis	3	0	3	3	267	12	2	71	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. sphenocarpa	5	0	4	4	8*	8	1	5.6	--	CR	B1ab(iii)+2ab(iii)
B. stevei	1	0	1	1	4*	4	1	2.1	--	CR	B1ab(iii)+2ab(iii)
B. strachwitzii	6	0	6	6	119	12	2	67	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. tjiasmantoi	1	0	1	1	4*	4	1	2.1	--	CR	B1ab(iii)+2ab(iii)
B. torajana	8	3	11	11	34	12	2	7.4	--	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. tumburanoensis	3	0	2	2	8*	8	2	6.3	4	EN	B1ab(iii)+2ab(iii)
B. varipeltata	5	0	5	5	16*	16	1	12	--	CR	B1ab(i,ii,iii)
B. vermeulenii	1	2	3	3	12*	12	2	8.8	4	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. watuwilensis	8	2	8	8	4112	28	4	3682	1082	EN	B1ab(i,ii,iii)+2ab(i,ii,iii)
B. willemii	12	0	10	9	23442	32	6	5184	428	VU	B2ab(i,ii,iii)

* Set to AOO estimate following the IUCN guidelines: "If EOO is less than AOO, EOO should be changed to make it equal to AOO to ensure consistency with the definition of AOO as an area within EOO."[3]

Supplementary Information Table 2. Endemicity, elevational range and forest cover loss.

Species	**Sulawesi endemic** [Y=yes; N=no]	**Limestone endemic** [Y=yes; N=no]	**Elevational range** [m]	**Elevational range** [range category[15]]	**Tree cover loss 2001-2022** [ha]	**Tree cover loss 2001-2022** [% total]	**Tree cover loss due to fire 2001-2022** [ha]
B. aptera	N	N	0-2583	lowland to tropalpine	172000	9	152000
B. balgooyi	Y	Y	72-1246	lowland to upland	9240	3.5	422
B. batusangiensis	Y	Y	959-1250	upland	138	18	4
B. bonthainensis	Y	N	1550-2134	montane	467	7.2	213
B. capituliformis	Y	N	500-1178	hill to upland	5720	4.9	451
B. carnosa	Y	N	5-370	lowland	29	4.4	0.46
B. celebica	Y	N	1050-1868	upland to montane	3800	4.5	62
B. chiasmogyna	Y	N	315-800	lowland to hill	9780	7.4	227
B. comestibilis	Y	N	34-2583	lowland to tropalpine	125000	7	8500
B. cuneatifolia	Y	N	300-1000	lowland to upland	105000	10	2720
B. didyma	Y	N	1050-1908	upland to montane	157	2.3	0.6
B. enoplocampa	Y	N	38-550	Lowland to hill	16	4.4	0.2
B. flacca	Y	Y	0-257	lowland	198000	15	6270
B. gambutensis	Y	N	700-1150	hill to upland	78	10	2
B. gemella	Y	Y	19-280	lowland	93	24	2
B. guttapila	Y	N	1359	upland	125	44	2
B. hekensis	Y	N	870-1120	upland	35	3	6
B. hispidissima	Y	N	1000-1404	upland	109	11	12
B. hooveriana	Y	Y	200-1618	lowland to montane	58200	6.4	5710
B. humilicaulis	Y	unknown	unknown	unknown	--	--	--
B. ignita	Y	unknown	unknown	unknown	--	--	--
B. imperfecta	Y	N	1400	upland	--	--	--
B. incudiformicarpa	Y	Y	5-180	lowland	116	16	2
B. insueta	Y	N	100	lowland	6	2.9	0.1
B. insularum	Y	N	203-800	lowland to hill	18	1.4	0.1
B. iskandariana	Y	Y	0-200	lowland	421	8.6	11
B. johntanii	Y	N	40	lowland	185	48	20
B. kabaenensis	Y	Y	1000-1250	upland	72	18	3
B. kinhoi	Y	N	342-1200	lowland to upland	300	4.4	8
B. labengkiensis	Y	Y	1	lowland	1.1	0.4	0.7
B. lasioura	Y	N	474-1000	hill to upland	184	5	4
B. mabberleyana	Y	Y	70-490	lowland to hill	534	18	5
B. macintyreana	Y	N	130-182	lowland	60	16	2

B. masarangensis	Y	N	1050-1800	upland to montane	22	2.5	0.1
B. matarombeoensis	Y	Y	2-204	lowland	1290	4.3	11
B. mattampensis	Y	Y	5-10	lowland	1	1.4	0
B. medicinalis	Y	N	350-700	lowland to upland	41	5.8	2
B. mekonggensis	Y	N	122-1535	lowland to montane	62500	15	3380
B. mendumiae	Y	N	18-556	lowland to hill	376000	13	51600
B. nobmanniae	Y	N	879-1050	upland	31	2.7	0
B. ozotothrix	Y	N	200-871	lowland to upland	551000	14	37600
B. pitopangii	Y	N	20-250	lowland	73	18	0.1
B. prionota	Y	Y	1013-2182	upland to montane	346	7.8	5
B. rachmatii	Y	N	881-1442	upland	4530	8.9	401
B. ranoposoensis	Y	Y	100-1784	upland to montane	18500	13	1010
B. rantemarioensis	Y	N	1496-1978	upland to montane	164	4.9	7
B. rieckei	N	N	10-2339	lowland to montane	4170000	5.1	239000
B. robusta	N	N	800-2572	upland to tropalpine	1110000	14	68900
B. rolandfadlii	Y	N	280	lowland	27	6.9	0.5
B. sanguineopilosa	Y	N	1824-2070	montane	54	12	13
B. sarasinorum	Y	N	571-764	hill	130	16	19
B. siccacaudata	Y	Y	20-299	lowland	1890	3.3	99
B. sidolensis	Y	N	800-1000	hill to upland	1	0.3	0
B. siregarii	Y	Y	811-855	hill to upland	35	7.3	0
B. sojolensis	Y	N	166-600	lowland to hill	1010	6.6	13
B. sphenocarpa	Y	N	871-1326	upland	41	5.2	3
B. stevei	Y	N	660	hill	11	2.7	3
B. strachwitzii	Y	N	192-760	lowland to hill	821	7.6	42
B. tjiasmantoi	Y	N	900-1100	upland	67	18	14
B. torajana	Y	N	800-1970	hill to montane	64	3.1	7
B. tumburanoensis	Y	Y	109-302	lowland	91	12	0.1
B. varipeltata	Y	N	92-1080	lowland to upland	369	27	23
B. vermeulenii	Y	Y	1126-1700	upland to montane	144	13	40
B. watuwilensis	Y	Y	115-1200	lowland to upland	9080	2.3	150
B. willemii	Y	Y	10-482	lowland to hill	113000	12	4220

Supplementary Information Table 3. Habitat descriptions.

Species	Habitat
B. aptera	The species has a relatively wide habitat tolerance. It grows terrestrially in lowland to montane forest from sea-level to ca. 2600 m elevation, in primary and secondary forest vegetation, and severely disturbed forest and forest margins at roadsides and plantations.
B. balgooyi	This limestone-endemic species grows terrestrially in lowland to upland forest at ca. 70 to 1250 m elevation, in primary or secondary forest vegetation, on steep slopes and river embankments, in humid and shaded places.
B. batusangiensis	This limestone-endemic species grows lithophytically in upland limestone karst habitats at ca. 950 to 1250 m elevation, in rock crevices on vertical limestone cliffs, in open areas exposed to direct sunlight.
B. bonthainensis	This species grows terrestrially in montane forest at about 1550 to 2350 m elevation, in primary and secondary forest vegetation, often on stream embankments, in dense shade. Locally abundant.
B. capituliformis	This species grows terrestrially in hill and upland forest at 500 to 1200 m elevation, in primary and secondary forest.
B. carnosa	This species grows terrestrially in lowland forest from about five to 370 m elevation. The only known recent collection of this species is from strongly disturbed vegetation in a village garden, in full shade.
B. celebica	This species grows terrestrially in upland to montane forest at about 1050 to 1900 m elevation, on the forest floor or on mossy rocks at stream embankments, in full shade to open areas.
B. chiasmogyna	This species grows terrestrially in lowland to hill forest at about 300 to 800 m elevation, in primary forest vegetation, in stream- or riverside habitats, in full shade.
B. comestibilis	This species grows terrestrially in lowland to montane forest at ca. 30 to 2500 m elevation, in primary to strongly disturbed forest vegetation, at road sides and margins of coffee plantations, in full to half-shade, sometimes in open, sun-exposed habitats, but then plants with signs of sun damage.
B. cuneatifolia	This species grows terrestrially in lowland to upland forest at ca. 300 to 1000 m elevation, in primary to secondary forest vegetation.
B. didyma	This species grows terrestrially in upland to montane forest from ca. 1050 to 1910 m elevation, in primary to disturbed forest vegetation, on rocky ground.
B. enoplocampa	This species grows terrestrially or lithophytically in lowland to hill forest at ca. 40 to 550 m elevation, in primary to strongly disturbed forest vegetation, on river embankments and in village gardens, in soil or in between and on large volcanic rocks.
B. flacca	This limestone-endemic species grows lithophytically in lowland forest from sea-level to ca. 260 m elevation, in primary to disturbed forest vegetation, on vertical limestone cliffs, limestone boulders, steep slopes, cave mouths, and shaded road embankments.
B. gambutensis	This species grows terrestrially in hill to upland rainforest at ca. 700 to 1150 m elevation, in primary forest vegetation, in river-side habitats.

B. gemella	This limestone-endemic species grows lithophytically in limestone karst habitats in lowland forest at ca. 20 to 280 m elevation, in secondary forest vegetation, on limestone walls, in half-shade to full shade.
B. guttapila	This species grows terrestrially in upland forest at ca. 1360 m elevation.
B. hekensis	This species grows terrestrially in upland forest at ca. 850 to 1150 m elevation, in primary forest vegetation, often along the sides of small streams.
B. hispidissima	This species grows terrestrially in upland forest at ca. 1000 to 1400 m elevation, in secondary forest vegetation, reported from semi-shaded habitats including steep slopes and level, marshy terrain.
B. hooveriana	This species grows terrestrially or lithophytically in lowland to montane forests from sea-level to about 1600 m elevation, in secondary to severely disturbed forest vegetation, in semi-shade to open habitats, frequently on limestone but also recorded on granite.
B. humilicaulis	unknown
B. ignita	unknown
B. imperfecta	This species grows terrestrially in upland forest at ca. 1400 m elevation.
B. incudiformicarpa	This limestone-endemic species grows lithophytically in lowland forest from sea-level to about 180 m elevation, on limestone cliffs and coralline limestone rocks, in primary to strongly disturbed forest vegetation, in partial to full shade.
B. insueta	This species grows terrestrially in lowland forest at ca. 100 m elevation; it was observed growing on a rocky slope, in full shade.
B. insularum	This species grows terrestrially in hill forest at around 800 m elevation, in primary and secondary forest.
B. iskandariana	This limestone-endemic species grows lithophytically in lowland limestone karst habitats from sea-level to about 200 m elevation, including limestone cliff walls, cave mouths and stalactites at cave entrances.
B. johntanii	This species grows terrestrially in lowland forest at around 100 m elevation, in secondary forest vegetation; it was observed on slopes at the side of a small stream.
B. kabaenensis	This limestone-endemic species grows lithophytically in upland limestone karst habitats at ca. 1000 to 1250 m elevation, at the base of limestone cliffs, in humid and shaded areas.
B. kinhoi	This species grows terrestrially in lowland to upland forest at ca. 340 to 1200 m elevation, in secondary forest to strongly disturbed forest vegetation.
B. labengkiensis	This limestone-endemic species grows lithophytically in lowland limestone karst habitats, in crevices of vertical limestone cliffs in coastal limestone forest, in shaded places.
B. lasioura	This species grows lithophytically in hill to upland forest between ca. 450 and 1000 m elevation, in primary forest vegetation and primary forest margins, on rocks and rock walls, in full shade.
B. mabberleyana	This limestone-endemic species grows terrestrially or lithophytically in lowland to hill forest at ca. 50 to 500 m elevation, in primary to severely disturbed secondary forest vegetation, terrestrially on limestone-derived soils or lithophytically on limestone rock, often along small streams and steep slopes along rivers, in dense to partial shade.
B. macintyreana	This species grows terrestrially in lowland forest at ca. 100 to 200 m elevation, in secondary forest, on steep slopes, in full shade.

B. masarangensis	This species grows terrestrially in upland to montane forest at ca. 1000 to 1800 m elevation, in primary and secondary forest vegetation, in full shade.
B. matarombeoensis	This limestone-endemic species grows lithophytically in lowland forest in limestone karst areas from sea-level to about 200 m elevation, on vertical limestone walls, in half-shade to full-shade. During the dry season the species was reported to be dormant.
B. mattampensis	This limestone-endemic species grows lithophytically in lowland limestone karst habitats from sea-level to about 10 m elevation, creeping on vertical limestone walls, at cave entrances.
B. medicinalis	This species grows terrestrially or lithophytically in lowland to upland rainforest at ca. 350 to 700 m elevation, in primary forest vegetation, on or between larger rocks, in shady and humid places.
B. mekonggensis	This species grows terrestrially in lowland to montane rainforest at ca. 100 to 1550 m elevation, in primary and secondary forest, disturbed forest margins and strongly disturbed vegetation on road embankments, frequently observed on limestone-derived soils, in full shade to partial shade.
B. mendumiae	The species grows terrestrially or lithophytically in lowland to hill forest from sea-level to about 560 m elevation, in secondary forest to strongly disturbed vegetation, frequently on limestone rocks or limestone-derived soil, but also observed on other substrates, in full to partial shade.
B. nobmanniae	This species was observed growing lithophytically at the margin of upland forest at ca. 850 to 1000 m elevation, at the margin of a secondary forest patch, on ledges and in crevices on an almost vertical rock wall.
B. ozotothrix	This species grows terrestrially or lithophytically in lowland to upland forest from sea-level to ca. 900 m elevation, in primary, secondary or severely disturbed forest vegetation, either lithophytically on limestone rock or mossy granite, or terrestrially in soil on limestone bedrock or alluvial soils, in full shade to partial shade.
B. pitopangii	This species grows terrestrially in lowland forest from sea-level to about 250 m elevation, in secondary forest vegetation, in full shade.
B. prionota	This limestone-endemic species grows terrestrially or lithophytically in limestone karst habitats in upland to montane rainforest between ca. 1000 and 2200 m elevation, in primary, secondary and strongly disturbed forest vegetation, lithophytically on limestone rock walls or terrestrially on steep slopes or river banks on limestone-derived soils, in full shade to open places.
B. rachmatii	This species grows terrestrially in upland forest between ca. 880 and 1450 m elevation, in primary and secondary forest and strongly disturbed forest patch remnants, at stream margins and on slopes lining rivers.
B. ranoposoensis	This limestone-endemic species grows lithophytically or terrestrially in lowland to montane forest at ca. 100 to 1800 m elevation, in primary and secondary forest, lithophytically on vertical limestone cliffs, cave entrances and limestone rocks, or terrestrially on soil on limestone bedrock at stream margins, on slopes and on road embankments, in full shade.
B. rantemarioensis	This species grows terrestrially in upland to montane rainforest at ca. 1500 to 2000 m elevation, in primary and secondary rainforest vegetation, on steep slopes and ridges, in humid places, in full to partial shade. Locally abundant.
B. rieckei	This species grows terrestrially in lowland to montane forests from sea-level to ca. 2350 m elevation, in primary forest, secondary forest, and severely disturbed forest vegetation, in full to partial shade.

B. robusta	This species grows terrestrially in hill to montane rainforest at ca. 800 to 2600 m elevation.
B. rolandfadlii	This species grows terrestrially in lowland forest, on steep slopes with thick leaf litter layer, in dense shade.
B. sanguineopilosa	This species grows terrestrially in montane forest at ca. 1800 to 2100 m elevation, in primary forest and secondary forest, on steep slopes.
B. sarasinorum	This species grows terrestrially in hill forest at ca. 550 to 800 m elevation, in primary and secondary forest, on slopes and road embankments, in full shade to half-shade.
B. siccacaudata	This limestone-endemic species grows lithophytically in lowland limestone karst habitats from sea-level to about 300 m elevation, in primary to strongly disturbed lowland forest on limestone, on the limestone cliff walls, cave entrances and on limestone boulders, in partial to full shade.
B. sidolensis	This species grows terrestrially in hill to upland forest at ca. 800 to 1000 m elevation, on steep slopes, in dense shade.
B. siregarii	This limestone-endemic species grows terrestrially or lithophytically in hill to upland limestone karst habitats at ca. 800 to 860 m elevation, in secondary forest and strongly disturbed forest vegetation, lithophytically on limestone cliffs and limestone outcrops, terrestrially at the base of limestone cliffs, on road embankments, in full shade to open places.
B. sojolensis	This species grows terrestrially in lowland to hill forest at ca. 150 to 600 m elevation, in secondary forest, in disturbed habitats, on steep, rocky river embankments and rocky slopes, in full shade.
B. sphenocarpa	This species grows terrestrially in upland forest at ca. 850 to 1350 m elevation, secondary forest, disturbed forest margins, road embankments, in full shade.
B. stevei	This species grows terrestrially in hill forest.
B. strachwitzii	This species grows terrestrially in lowland to hill forest at ca. 190 to 800 m elevation, in secondary forest. It has been reported from humus-covered slopes, damp and flat places, and disturbed riverside vegetation, in full shade.
B. tjiasmantoi	This species grows terrestrially in upland forest at ca. 900 to 1100 m elevation, in strongly disturbed secondary forest, on steep slopes of an irrigation water channel in a coffee plantation, in dense shade.
B. torajana	This species grows terrestrially in hill to montane forest between ca. 800 and 2000 m elevation, in primary and secondary forest and strongly disturbed forest remnants, in strongly disturbed habitats at forest margins, on steep slopes and level ground, besides small springs and streams, on road embankments, usually in humid places, in full shade to partial shade.
B. tumburanoensis	This limestone-endemic species grows lithophytically in lowland limestone karst forest habitats at ca. 100 to 300 m elevation, on limestone walls and limestone boulders on steep slopes at waterfalls.
B. varipeltata	This species grows terrestrially or lithophytically in lowland to upland forest at ca. 90 to 1100 m elevation, in primary and secondary forest, lithophytically on wet, riverside rock walls or terrestrially in thickets.
B. vermeulenii	This limestone-endemic species grows terrestrially in upland to montane limestone forest at ca. 1100 to 1700 m elevation, in remnant primary forest pockets on limestone slopes.

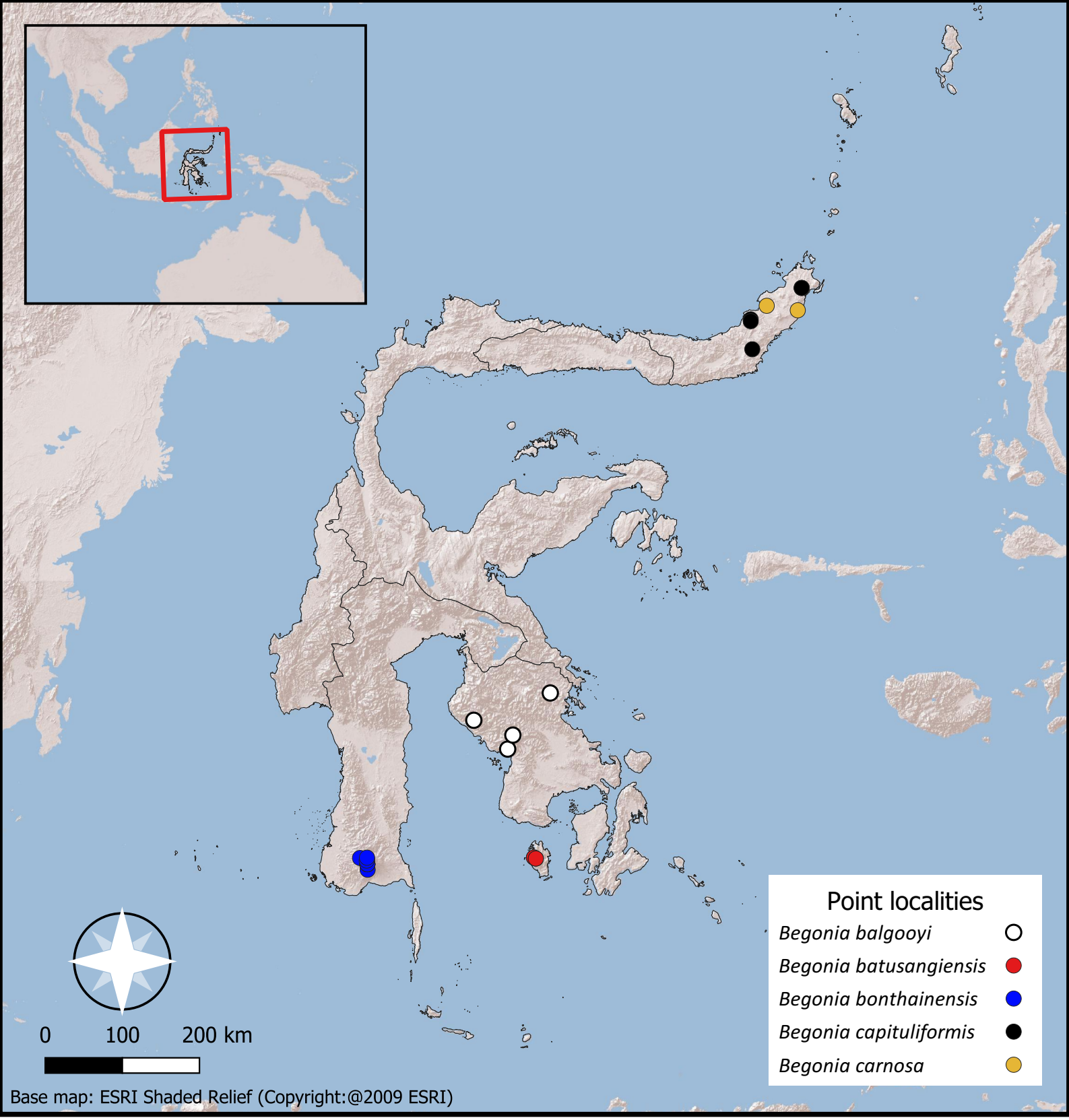
B. watuwilensis	This limestone-endemic species grows terrestrially or lithophytically in lowland to upland limestone karst forest at ca. 100 to 1200 m elevation, in primary forest, on limestone cliffs and rocks, on moist stalactites, or terrestrially on steep slopes on limestone bedrock, in full shade to partial shade.
B. willemii	This limestone-endemic species grows lithophytically or terrestrially in lowland to hill limestone karst forest from sea-level to ca. 500 m elevation, in primary and secondary forests, in strongly disturbed forest vegetation, lithophytically on vertical cliffs or limestone boulders or terrestrially in soil at the base of limestone boulders, in full to partial shade. Locally abundant.

Supplementary Information Table 4. Presence in legally protected areas.

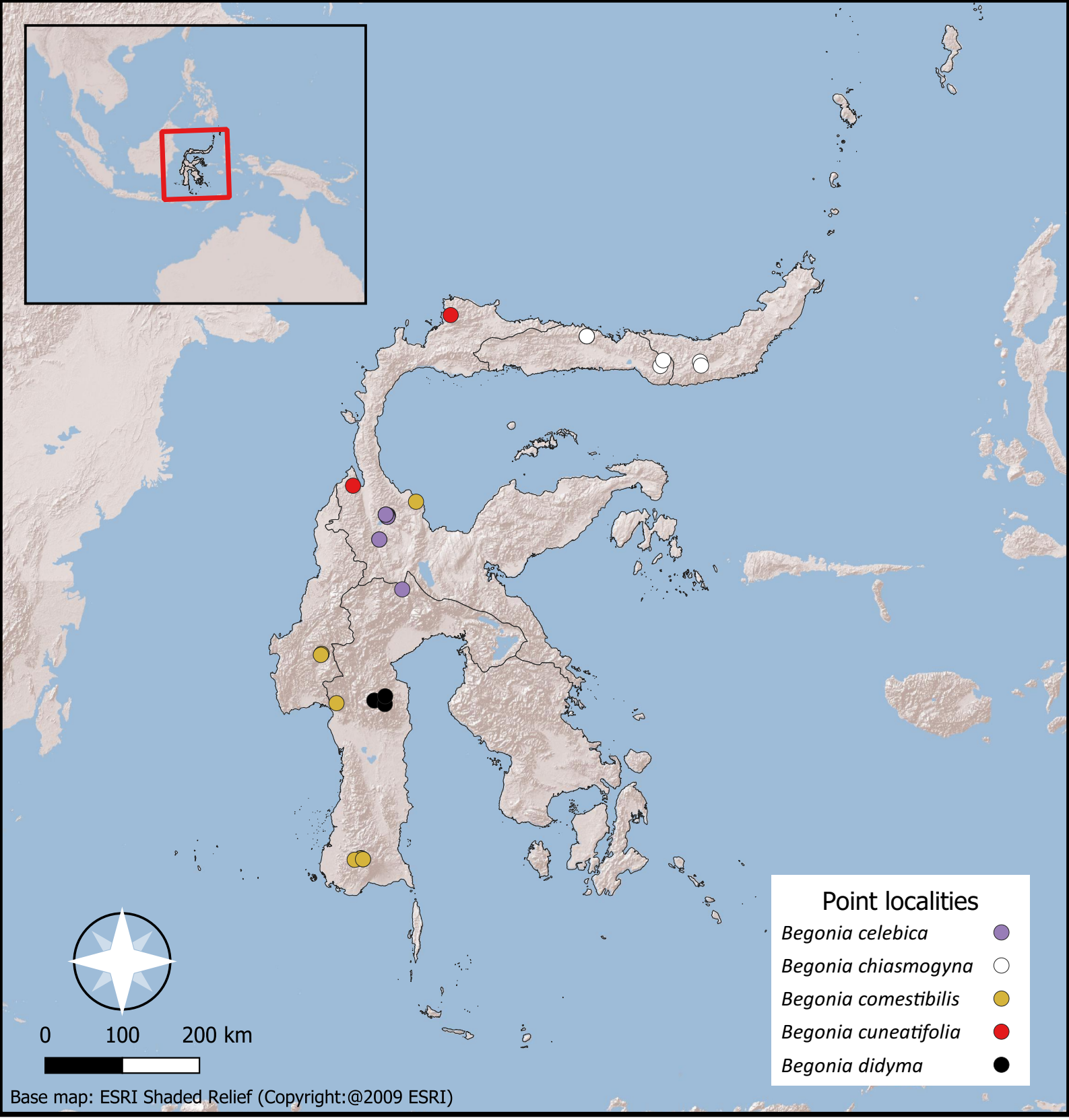
Species	Protected area
B. aptera	Bogani Nani Wartabone National Park (IUCN category II), Ganda Dewata National Park (IUCN category II), Lore Lindu National Park (IUCN category II)
B. balgooyi	Mangolo Nature Recreation Park (IUCN category V)
B. batusangiensis	
B. bonthainensis	Malino Nature Recreation Park (IUCN category V)
B. capituliformis	Gunung Ambang Nature Reserve (IUCN category III)
B. carnosa	
B. celebica	Lore Lindu National Park (IUCN category II)
B. chiasmogyna	Bogani Nani Wartabone National Park (IUCN category II), Nantu Wildlife Reserve (IUCN category III)
B. comestibilis	Ganda Dewata National Park (IUCN category II)
B. cuneatifolia	Nantu Wildlife Reserve (IUCN category III)
B. didyma	
B. enoplocampa	
B. flacca	Rawa Aopa Watumohai National Park (IUCN Category II), Tanjung Peropa Wildlife Reserve (IUCN category IV), Murhum (Nipa-Nipa) Grand Forest Park (IUCN category VI)
B. gambutensis	Bogani Nani Wartabone National Park (IUCN category II)
B. gemella	
B. guttapila	
B. hekensis	
B. hispidissima	Gunung Ambang Nature Reserve (IUCN category III)
B. hooveriana	Lore Lindu National Park (IUCN category II), Wera Nature Recreation Park (IUCN category V)
B. humilicaulis	
B. ignita	
B. imperfecta	
B. incudiformicarpa	
B. insueta	
B. insularum	
B. iskandariana	
B. johntanii	
B. kabaenensis	
B. kinhoi	

B. labengkiensis	
B. lasioura	Faruhumpenai Nature Reserve (IUCN category Ia)
B. mabberleyana	
B. macintyreana	Bogani Nani Wartabone National Park (IUCN category II) [at the border]
B. masarangensis	
B. matarombeoensis	
B. mattampensis	
B. medicinalis	
B. mekonggensis	Faruhumpenai Nature Reserve (IUCN category Ia), Banggai Kepulauan Nature Recreation Park (IUCN category V)
B. mendumiae	Pamona Nature Reserve (IUCN category Ia)
B. nobmanniae	
B. ozotothrix	Bantimurung Bulusaraung National Park (IUCN category II)
B. pitopangii	Gunung Sojol Nature Reserve (IUCN category Ia)
B. prionota	
B. rachmatii	
B. ranoposoensis	
B. rantemarioensis	
B. rieckei	Gunung Sojol Nature Reserve (IUCN category Ia), Pangi Binangga Nature Reserve (IUCN category Ia), Bogani Nani Wartabone National Park (IUCN category II), Lore Lindu National Park (IUCN category II), Gunung Duasaudara Nature Reserve (IUCN category III), Nantu Wildlife Reserve (IUCN category III)
B. robusta	
B. rolandfadlii	
B. sanguineopilosa	
B. sarasinorum	Lore Lindu National Park (IUCN category II)
B. siccacaudata	Bantimurung Bulusaraung National Park (IUCN category II)
B. sidolensis	
B. siregarii	
B. sojolensis	Gunung Sojol Nature Reserve (IUCN category Ia)
B. sphenocarpa	
B. stevei	
B. strachwitzii	Bogani Nani Wartabone National Park (IUCN category II)
B. tjiasmantoi	
B. torajana	

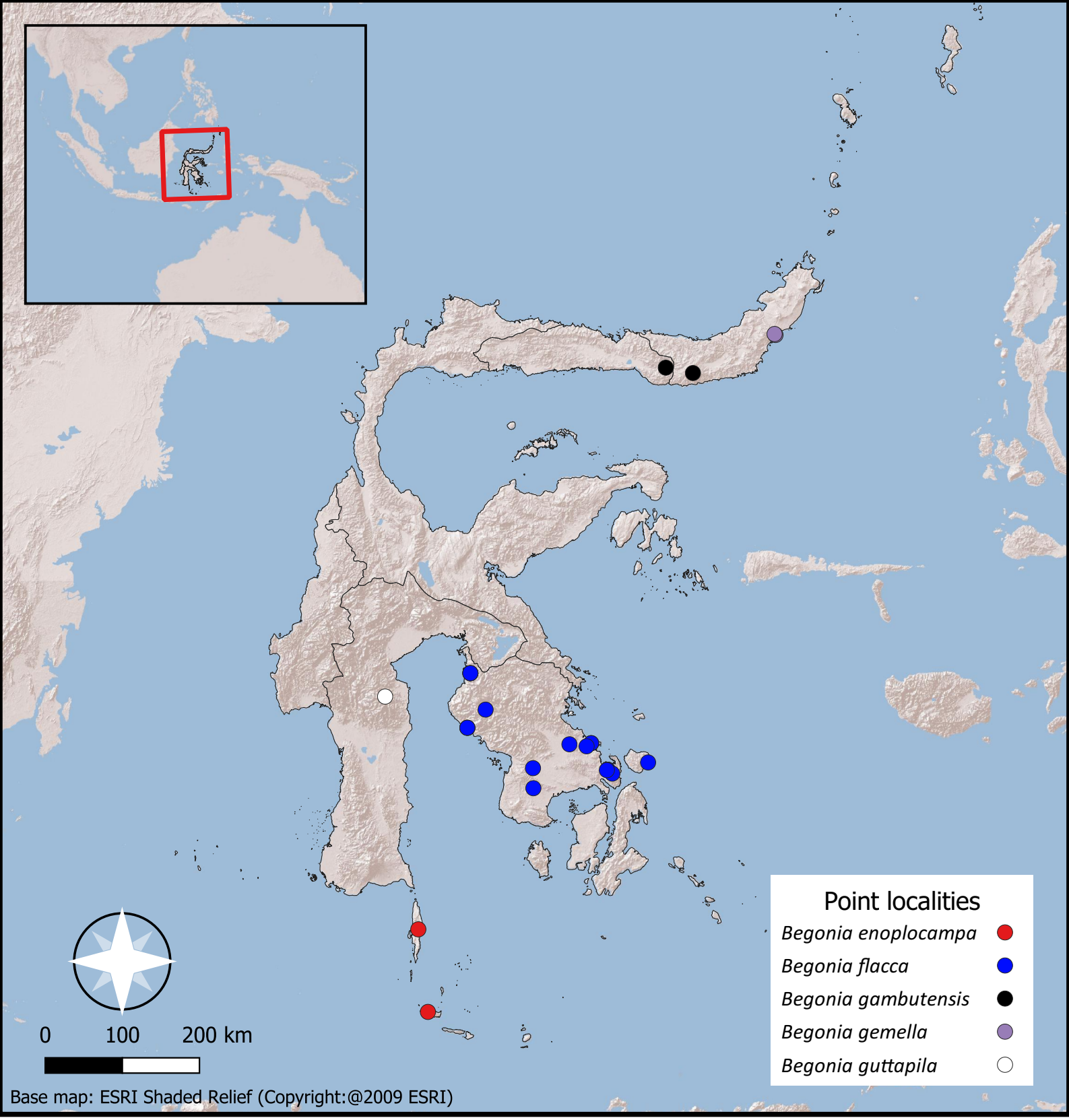
B. tumburanoensis	
B. varipeltata	
B. vermeulenii	
B. watuwilensis	
B. willemii	Nantu Wildlife Reserve (IUCN category III), Lombuyan I and II Wildlife Reserve (IUCN category IV)



Supplementary Figure 1. Distribution map.

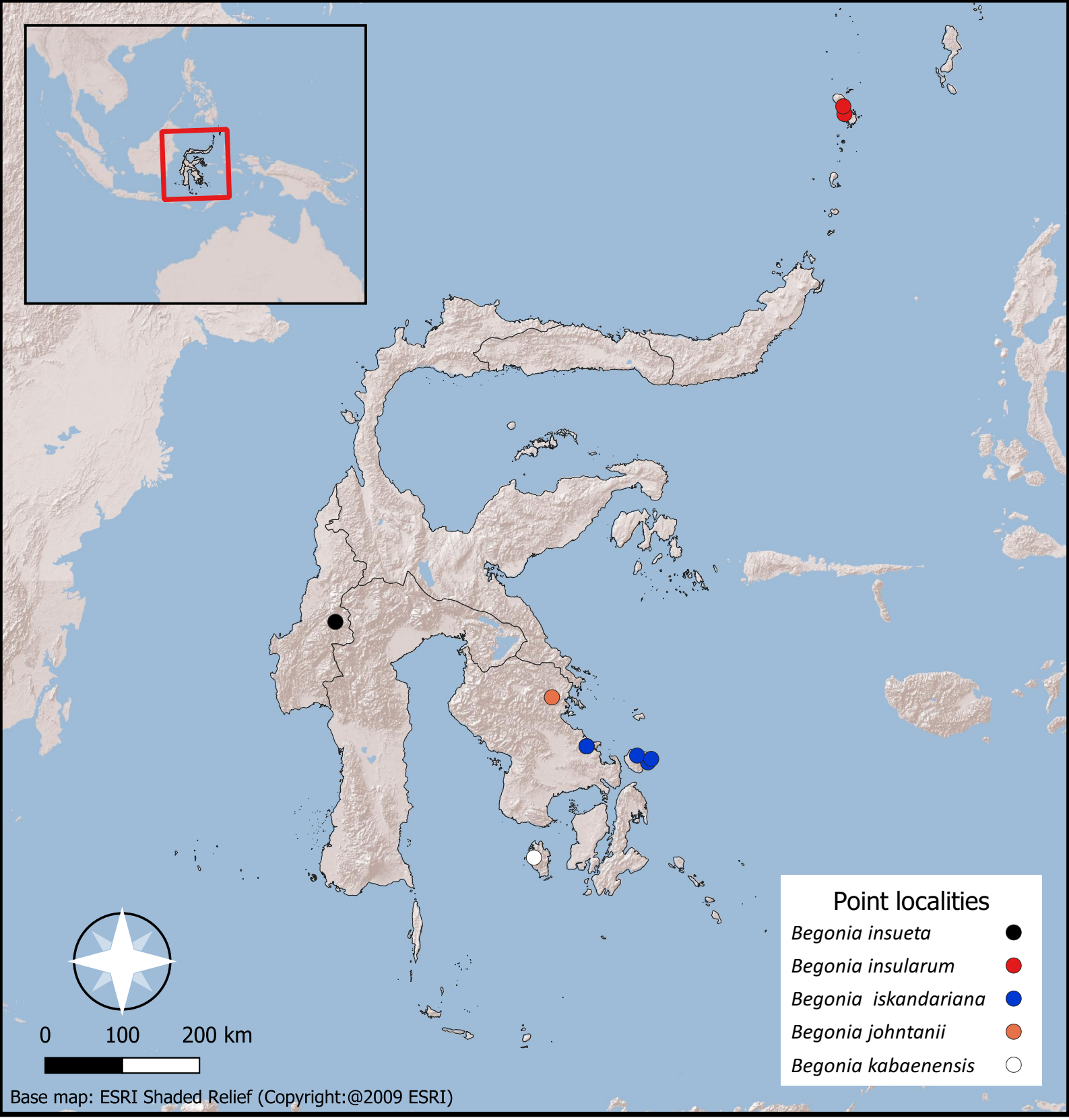


Supplementary Figure 2. Distribution map.

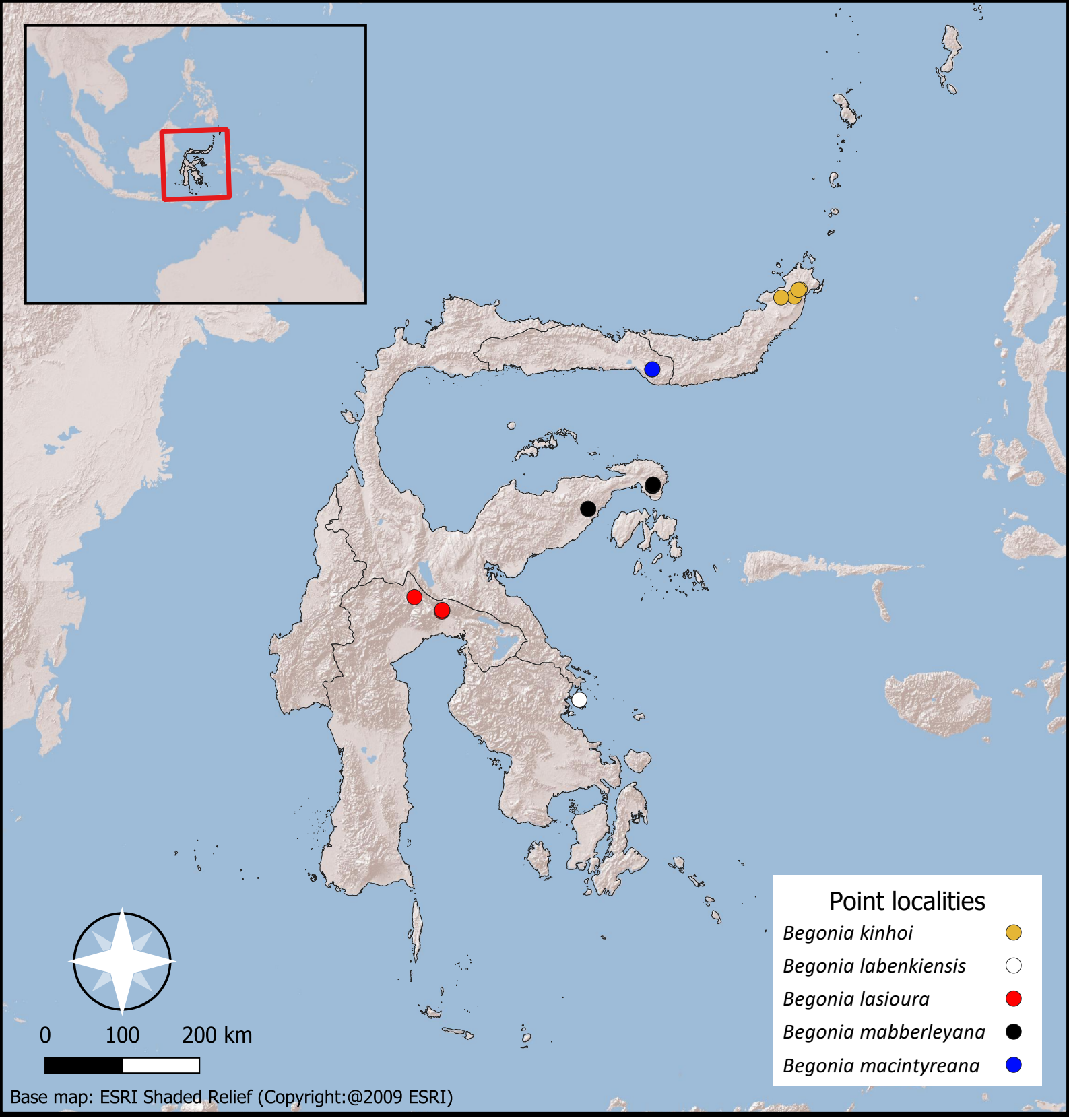


Supplementary Figure 3. Distribution map.

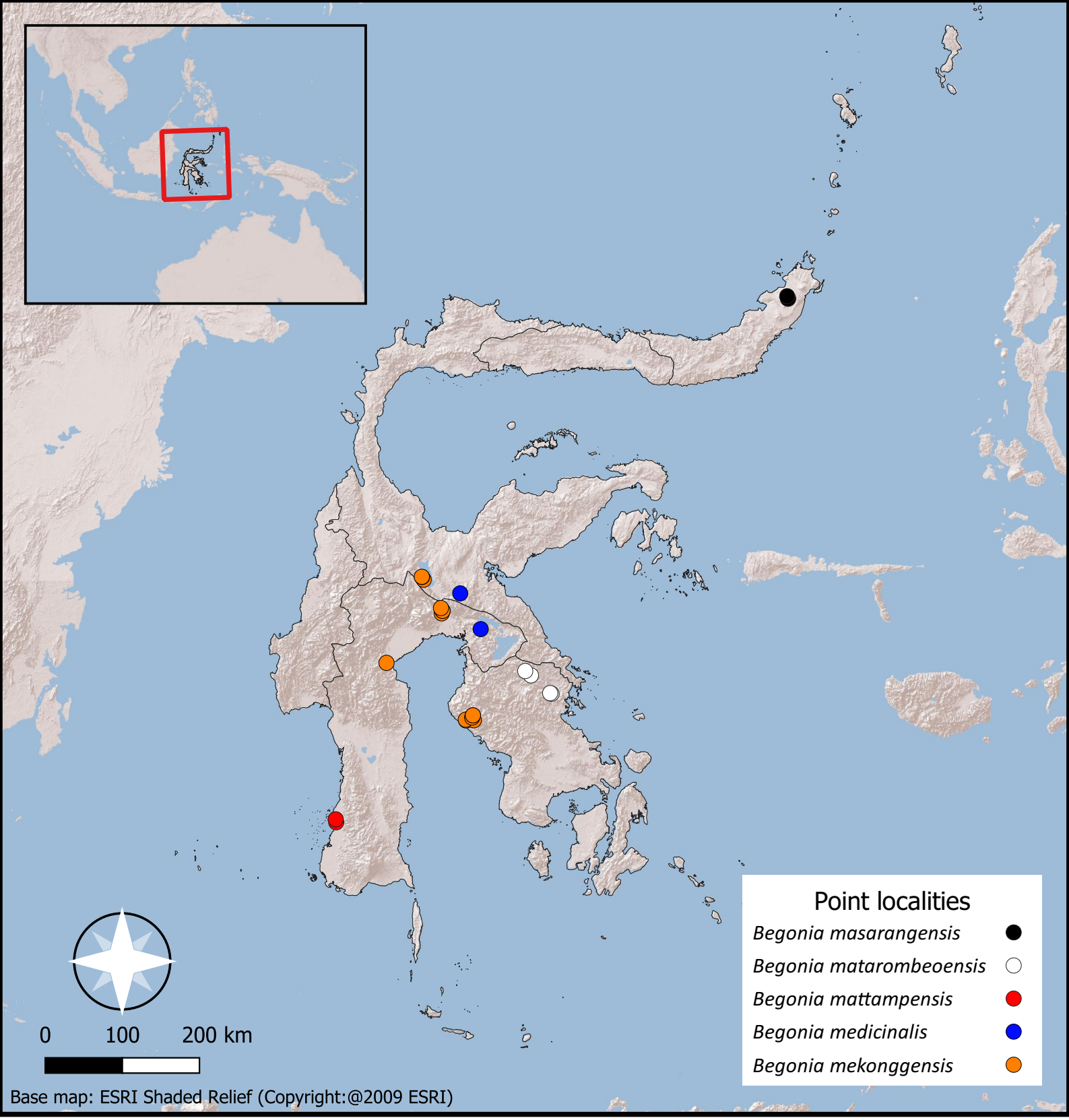
Supplementary Figure 4. Distribution map.



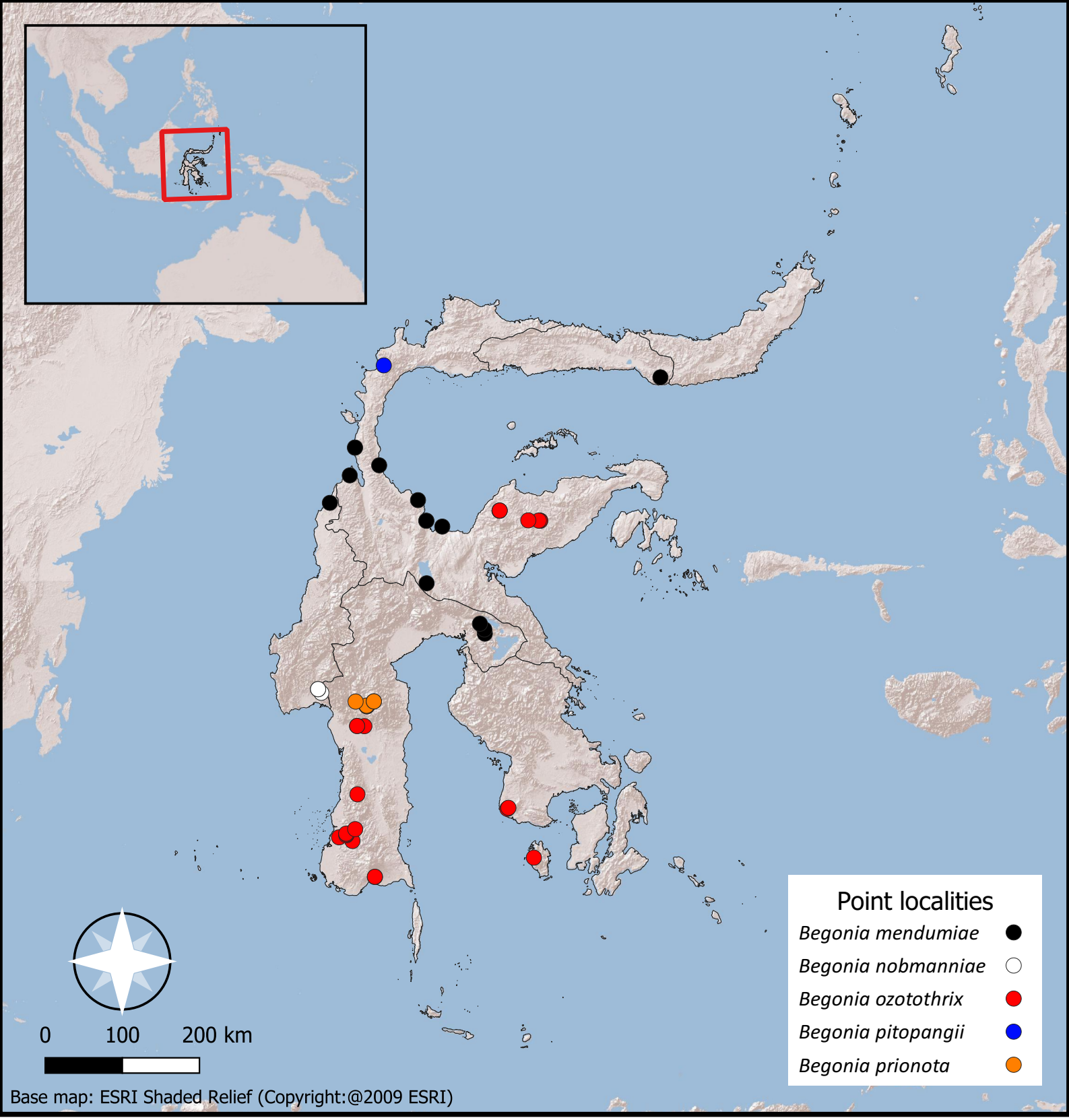
Supplementary Figure 5. Distribution map.



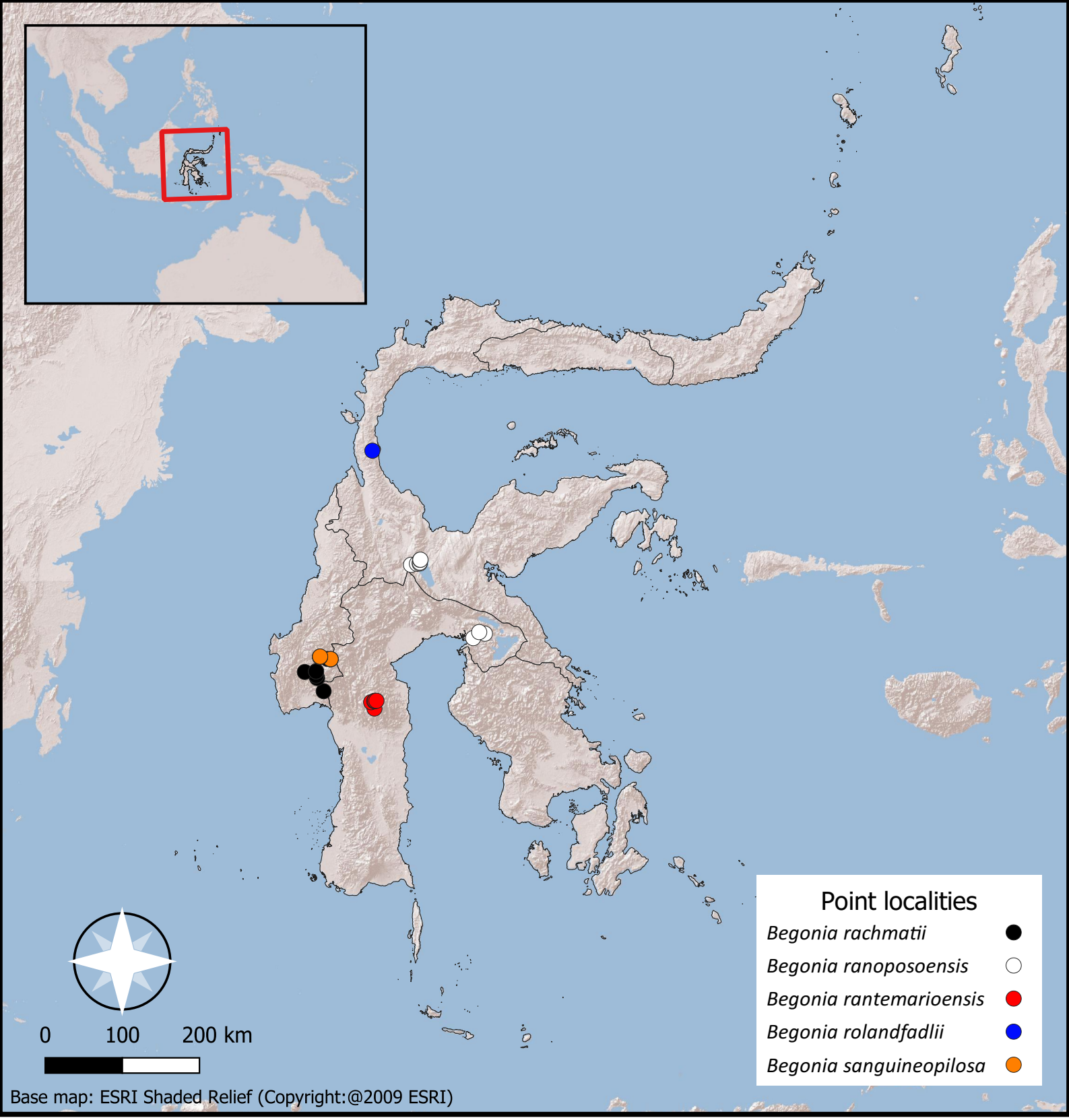
Supplementary Figure 6. Distribution map.



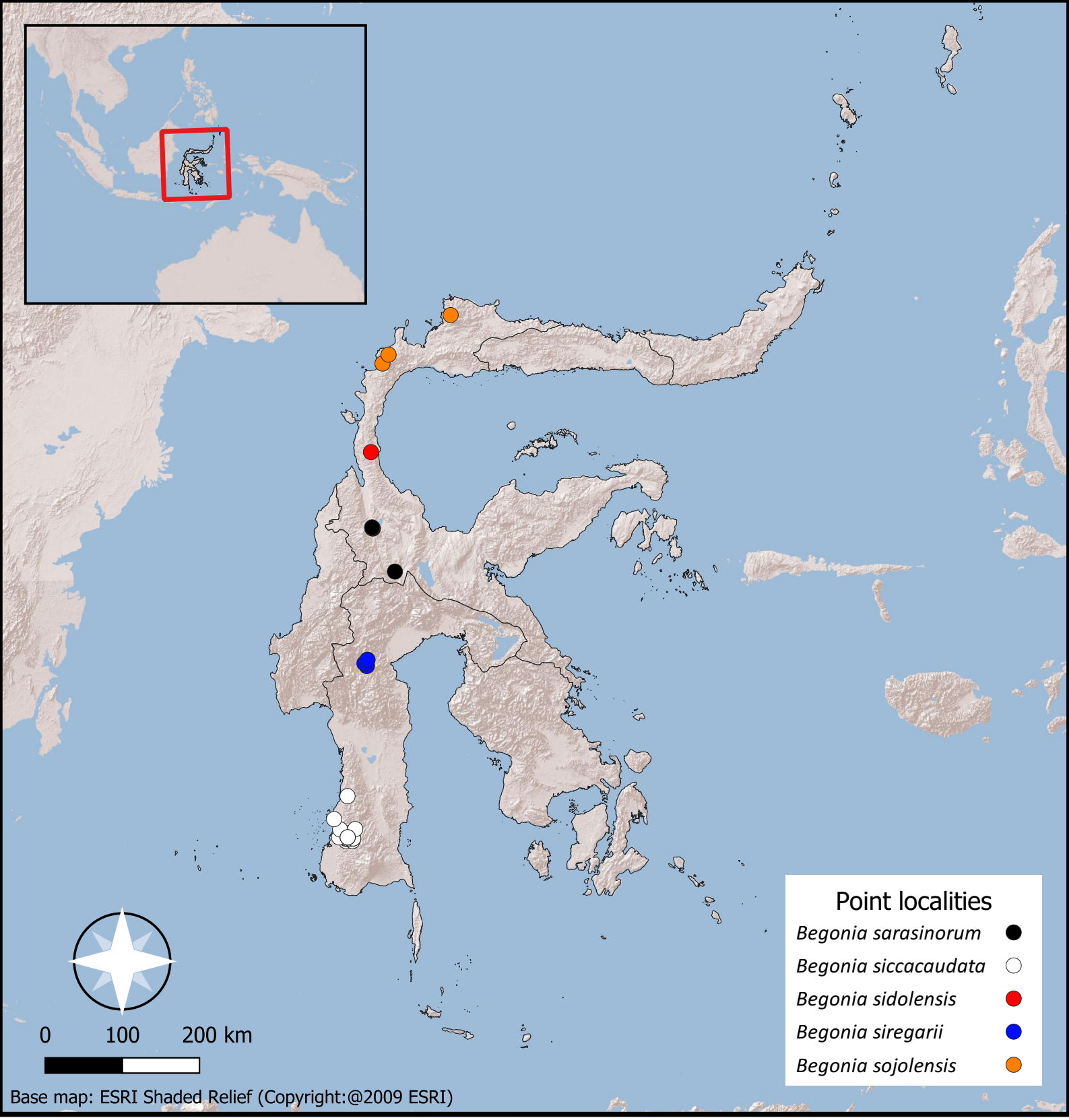
Supplementary Figure 7. Distribution map.



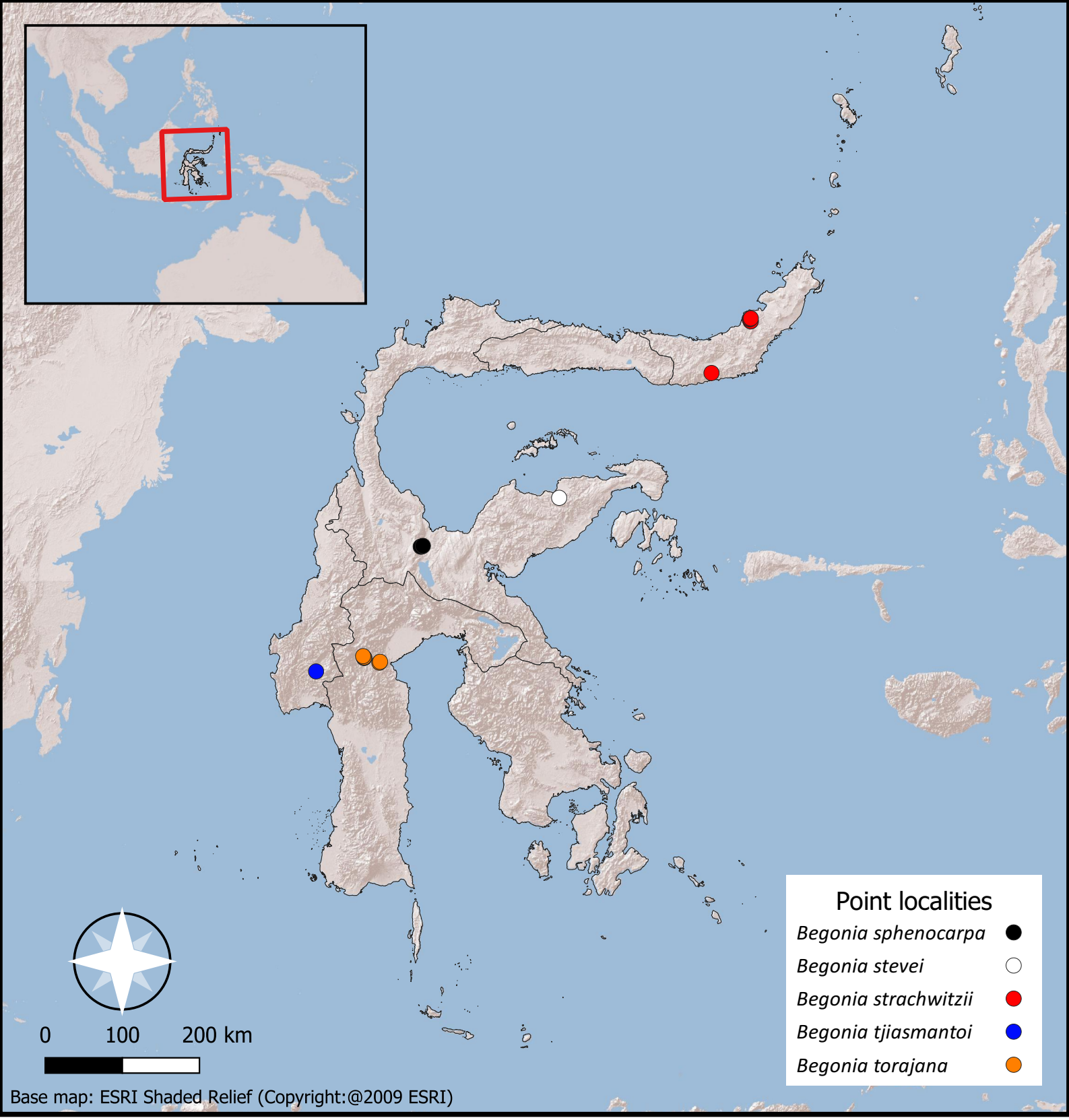
Supplementary Figure 8. Distribution map.



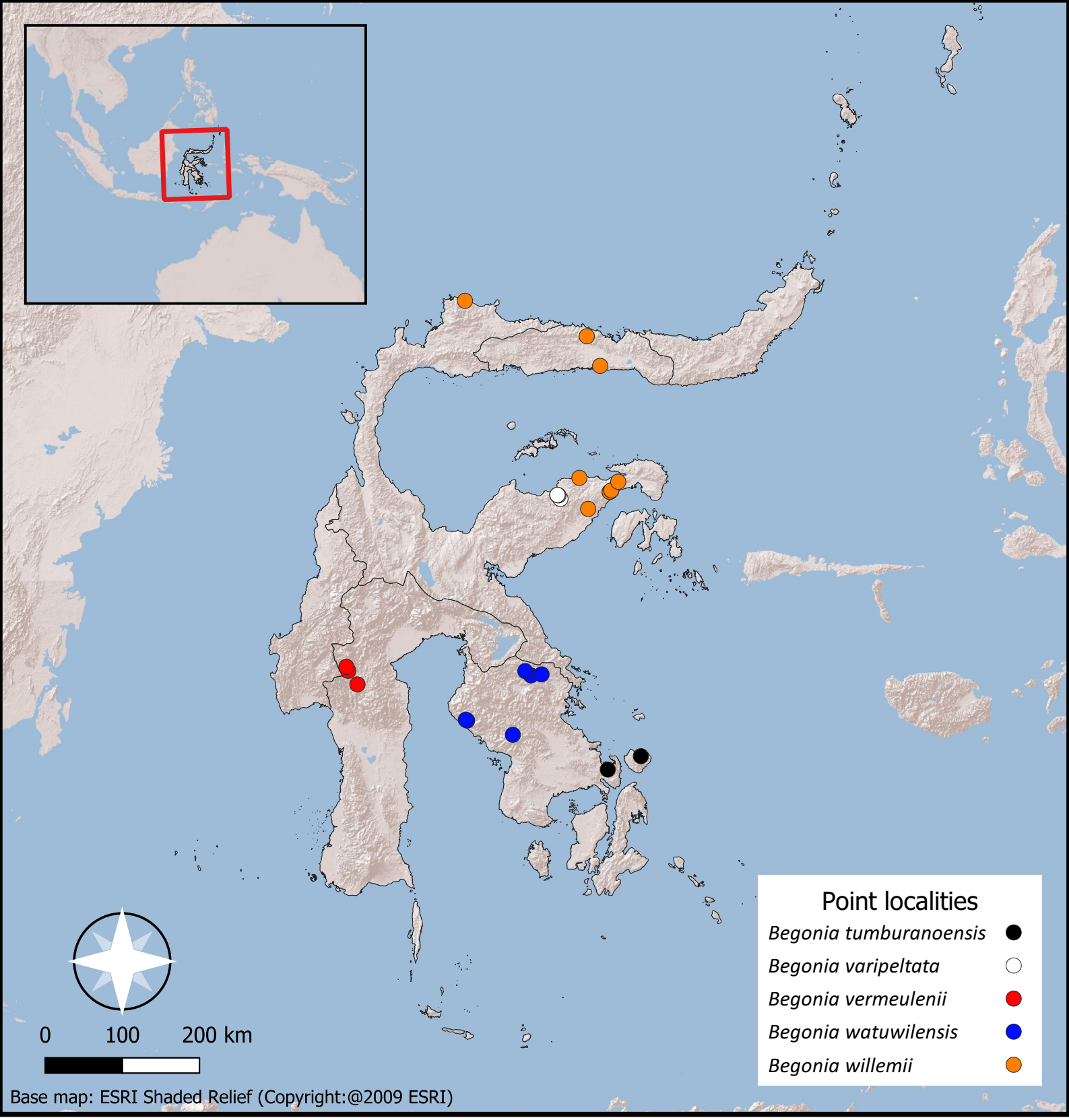
Supplementary Figure 9. Distribution map.



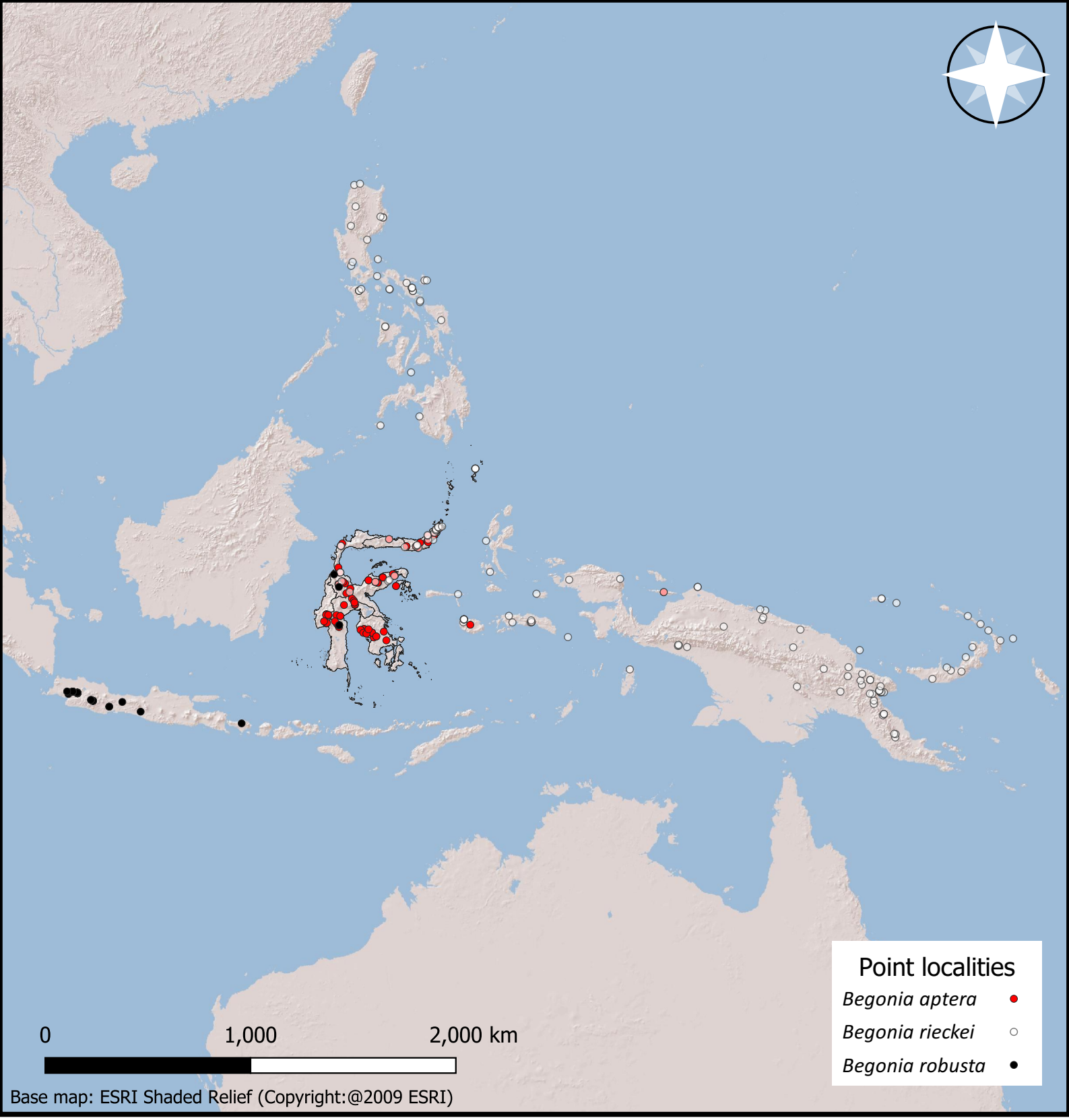
Supplementary Figure 10. Distribution map.



Supplementary Figure 11. Distribution map.



Supplementary Figure 12. Distribution map.



Supplementary Figure 13. Distribution map. Pink colour indicates overlap of occurrences of Begonia aptera (red) and B. rieckei (white).