Table 6. List of fossil specimens of Elephantoidea from South Sulawesi, which were examined during this study. Most of the listed material was collected during the GRDC 1985 and 1986 expeditions and during four successive GRDC/NNM fieldwork periods from 1989 until 1993. All this material is housed in the GRDC Collection. In addition, some important specimens in the collection of the MPC are included in this list. The material is classified per taxon distinguished in the paleontological part of this thesis. For each taxon the specimens are classified per locality (first column). Finding localities of specimens collected in 1985 or 1986 are indicated with an underlined locality number, which was used by Aziz (1990) and which is distinct from the FVL indications used in this thesis. If known, the FVL number is placed between brackets behind the locality code of Aziz. The locality code of the MPC is underlined, followed by the locality code used in this thesis. In the second column are listed the finding circumstances (such as in situ, surface collected or semi in situ = with matrix attached), enabling the inference of the layer of origin. The third column mentions the collection number of each specimen, followed by a short description of the specimens in the fourth column.

'Elephas' celebensis (Hooijer, 1949)

Locality	Circumstances	Coll. no.	Element
FVL-1a	in situ	Lp-3196	sin. mandibular ramus with root dP_2 or P_2, dP_3 and dP_4 fragment
FVL-25a	surface	S-2410	molar lamella fragment
	surface	S-2411	molar lamella fragment
	surface	S-2412	sin. M_1 fragment
	surface	S-2413	molar fragment (2 half-lamellae)
	surface	S-2414	molar lamella fragment
	surface	S-2415	upper molar fragment
	surface	S-2417	molar lamella fragment
	surface	S-2418	post. molar fragment (-1x lamellae)
	semi in situ	S-2422	tusk fragment
	surface	S-3949	dex. mandible fragment with P_3 and dP_4 fragment
	surface	S-3950	dP3 fragment
	surface	S-3951	upper milk tusk fragment
	surface	S-3952	upper tusk fragment
FVL-25b	surface	S-3964	molar lamella fragment
FVL-1b	in situ	Lp-3192	dex. mandible with M_1 and roots P_3 and dP_4
FVL-11	surface	BC-2958	molar fragment (2 half-plates)
Loc.10 (FVL-22)	surface	BEUL-191086-6	dex. lower tusk fragment
FVL-3/4/4a	surface	SB-2793	isolated lamella
	surface	SB-3747	posterior molar fragment
	surface	890602-2	dex. dP^4
	surface	890602-3	upper tusk fragment
Loc.18 (FVL-3)	surface	LCL-221086-24	sin. lower tusk fragment
	surface	LCL/221086-1	dex. posterior M^3 fragment
Loc.16 (FVL-4a)	surface	SCL/030186-37	dex. M^2
	surface	SCL/030186-38	sin. posterior M^3 fragment
	surface	SCL/030186-41	sin. M_3 fragment
Loc.15 (200 m NE of FVL-4a)	surface	STL-010186-20	sin. posterior M_1 fragment
FVL-5 excavation	surface	1307	sin. mandible fragment with P_3 and root fragment of dP_4
	surface	1324	molar lamella fragment
	surface	1327	molar lamella fragment
	surface	1328-1340	various fragments of a single upper tusk
	surface	1341	upper tusk fragm.
	surface	1342\	dex. dP^4\
	surface	1343/	sin. dP^4/ (pair with nr.1342)
	surface	1344	dex. maxilla fragment with P^2 or P^3 and root dP^3 or dP^4
	surface	1364	lower tusk fragment
	surface	1372	molar lamella fragment
	in situ	1516	M^2 fragment
	surface	2031	upper molar fragment, very worn
	in situ	2252	upper tusk fragment
	surface	L2-2378	sin. anterior M_1 fragment
FVL-5 sandstone layer above excavation level	semi-in situ	2317	sin. M^1
FVL-6	surface	L1-2356	post. M1 or M2 fragment
	surface	L1-2357	tusk fragment
Loc.17 (FVL-7)	in situ	LWTL/151186-1	skull with sin. M^3
Loc.9 (surround-ings FVL-15)	surface	MTL/251285-1	sin. M^2

Table 6

FVL-12	surface	BC-2945	sin. posterior M^2 fragment

FVL-24a	surface	LR-2737	sin. posterior M_2 fragment
	surface	LR-2738	molar lamella fragment
	surface	LR-2743	molar lamella fragment
	surface	LR-2752	molar lamella fragment
	surface	LR-2756	molar lamella fragment
	surface	LR-2759	tusk fragment
	in situ	LR-3517	dex. posterior M_3 fragment
	in situ	L-3985	P^2 or P^3
FVL-24b	surface	LR-2735	molar lamella fragment
FVL-24c excavation	in situ	LR-3513	molar lamella fragment
FVL-30	surface	890522	posterior fragment of dex. lower molar

Stegodon sompoensis Hooijer, 1964

Locality	Circumstances	Coll. No.	Element
FVL-11;	surface; pebbly sandstone matrix	BC-2990	sin. mandible fragment with posterior M_2 fragment and anterior M_3 fragment
FVL-9	in situ	PA-3730	dex. dP^4
FVL-2	in situ	L/III-3036	premaxilla with orbitals and part of jugals.
FVL-5; excavation	surface	L2-2370	sin. posterior M^3 fragment
surroundings FVL-6	surface	890521	sin. M^2 fragment
lok.12 (c. 250 m W of FVL-20)	surface	BEUL/251285-1	sin. posterior dP^3 fragment
Marale 1 (surroundings FVL-15)	surface; pebbly sandstone matrix	C1/23/6-9-86	adult skull fragment with sin. M^3 fragment + root dex. M^3
FVL-10	in situ	BC-3050	adult skull with dentition broken at roots
Marale 3 = FVL-17;	surface; pebbly sandstone matrix	C3/2/79	sin. mandible with posterior fragment M_2 and partial M_3 in alveole
		C3/27-A/251286	skull fragment with posterior fragment M^3
Surroundings FVL-16/17	surface	890603-1	sin. posterior M_3 fragment
FVL-12	surface	BC-2946	dex. posterior M_3 fragment
loc. 13 (= surroundings FVL-12)	surface	CMTL/271285-1	sin. mandible with M_3
loc. 20 (c. 1 km E of FVL-17)	surface	MUTL/171186-1\	dex. anterior M_3 fragment
	surface	MUTL/171186-2/	sin. anterior M_3 fragment (pair with MUTL/171186-1)
FVL-24c; excavation	surface	LR-2703	sin. posterior dP_4 fragment
FVL-28	surface	PT-3111	dP^2 fragment
FVL-30	surface	890522	dex. posterior M_3 fragment

Stegodon cf. *sompoensis* Hooijer, 1964

Locality	Circumstances	Coll. No.	Element
FVL-3/4/4a	surface	SB-3755	upper tusk fragment
FVL-11	surface; pebbly sandstone matrix	BC-3051	upper tusk fragment
FVL-5; excavation	surface	1325	small molar fragment with part of root
	surface	1326	molar ridge fragment
	surface	1637	molar fragment
	surface	1884	upper tusk fragment
FVL-6	surface	2357-L1	upper tusk fragment
Marale 3 (=FVL-17)	surface	C3/29/17286	upper tusk fragment
FVL-13	surface; pebbly sandstone matrix	BC-2957/2959	two fragments of same upper M^2 or M^3
FVL-24b	surface	LR-2736	molar ridge
FVL-30	surface	P-3077	tusk fragment
	surface	P-3078	tusk fragment
	surface	P-3079	tusk fragment
	surface	P-3087	molar ridge fragment

Table 6

loc. 21 (c.700 m E of FVL-15)	surface	ABTL/161186-1	molar fragment (two ridges)

Stegodon sp. B

Locality	Circumstances	Coll. No.	Element
FVL-29	in situ	TA-3711	sin. dP^4 remnant + M^1
	in situ	TA-3712	dex. dP^4 remnant + anterior fragment M^1
	in situ 1 individual	TA-3714	upper tusk fragment
	in situ	TA-3715	upper tusk fragment
Tanrung (= FVL-29)	in situ	TRG/12-01-91 (coll. MPC)	posterior M^1 fragment, same M^1 as TA-3711
FVL-29	semi in situ	TA-3723	sin. mandible fragment with posterior fragment M_3
Pintareng, Sangihe (North Sulawesi)	in situ	PS-1/1 \	dex. posterior M^1 fragment
	in situ	PS-1/2 \	dex. anterior M^2 fragment
	in situ	PS-1/3 \	sin. anterior M^2 fragment
	in situ	PS-1/6 / 1 individual	tusk
	in situ	PS-55 /	phalange, distal epiphysis lacking
	in situ	PS-58 /	dex. astragalus
	in situ	PS-63 /	sin. mandible fragment
	in situ	PS-66 /	mandibular symphysis

Stegodon sp. (large-sized)

Locality	Circumstances	Coll. no.	Element
FVL-2	surface	L/III-3040	sin. upper molar fragment
FVL-12	surface	MPC coll.no.?	upper tusk fragment (cf. *Stegodon*)
Marale 3 (= FVL-17)	surface; pebbly sand-stone matrix)	C3/27-86	posterior fragment of upper molar
FVL-29	semi in situ	TA-3070	molar ridge fragment
	semi in situ	TA-3724	tusk fragment (cf. *Stegodon*)
	in situ (left in field)	no number	tusk fragment (cf. *Stegodon*)
	semi in situ	TA-3727	upper tusk fragment (cf. *Stegodon*)
Betue (Central Sulawesi)	surface	(MNSTP, no number)	dex. mandible fragment with molar fragment
	obtained from villagers	B-3999	lower molar fragment

Elephas sp. (large-sized; high-crowned)

Locality	Circumstances	Coll. No.	Element
FVL-29	semi in situ	TA-3920	posterior fragment of molar (-2 lamellae)

Stegodon sp. (dwarfed or large-sized?)

Locality	Circumstances	Coll. No.	Element
FVL-3/4/4a	surface	SB-3754	molar ridge fragment
	surface	SB-3752	molar ridge fragment
	surface	SB-3760	dex. lower molar fragment
	surface	SB-2791\	sin. lower molar fragment
	surface	SB-2792/	fragment of same molar as SB-2791
loc.18 (= FVL-3)	surface	LCL/221086-1	upper molar fragm. (3 lamellae)

Pygmy Elephantoidea (pE): postcranial elements

Locality	Circumstances	Coll. no.	Taxon	Element
FVL-25a	surface	S-2482	pE	costa fragment
	surface	S-2492	pE	fragment of tibia diaphysis
FVL-11	surface	BC-2999	pE	costa fragment
FVL-3/4	semi in situ	SB-3743	pE	vertebra cervicale VII fragm.: corpus
	surface	SB-2842	pE	sin. humerus fragm.: prox. epiphysis
	surface	SB-2850	pE	dex. humerus fragm.: prox. epiphysis
FVL-2	surface	PL-3736	*'Elephas' celebensis*	sin. humerus, distal epiphysis lacking (prox.epiph.fused)
	surface	PL-3737	pE	dex. femur fragment: dist.epiphysis (fused).
FVL-5; excavation	surface	1306	pE	dex. prox. ulna fragment (juv.: epiphysis olecranon not yet fused)
	surface	1311	pE	costa fragm.

Table 6

	surface	1345	pE	sin. proximal diaphysis fragment of tibia
	surface	1347	pE	sin. mandible fragment of horizontal ramus
	surface	1349	pE	sin. proximal tibia fragment
FVL-5;	surface	1351/52	pE	sin. scapula fragm.: glenoid + base spine
excavation	surface	1365	pE	costa fragment
	surface	1369	pE	dex. metatarsus IV (juv.: dist. epiphysis lacking)
	surface	1375	pE	cervical vertebra fragment
	surface	1379	pE	sin. proximal fragment ulna: olecranon
	surface	1387	pE	sin. ulna diaphysis fragment
	surface	1397	pE	sin. metatarsus I
	in situ	1520	pE	sin. metatarsus IV
	in situ	1556/57	pE	costa fragment
	in situ	1830	pE	vertebra lumbare fragm. juv. (both epiphyses lacking)
	surface	1878	pE	costa fragment
	surface	2001	pE	femur fragment: caput (fused)
	surface	2002	pE	dex. fragment of ulna diaphysis
	surface	2005	pE	dex. proximal tibia fragment
	surface	2006	pE	dex. distal ulna fragment
	surface	2028	pE	dex. proximal fragment ulna: olecranon
	in situ	2115-17	pE	costa fragment

FVL-5 above level excavation	surface; pebbly sandstone matrix	1354	pE	dex. mandible fragm.
	surface; sand-stone matrix	2320	pE	distal epiphysis fragment of dex. femur (fused)
FVL-6	surface	2323-L1	pE	femur fragment consisting of caput
	surface	2324-L1	pE	proximal diaphysis of sin. humerus (juvenile epiphysis lacking)
	surface	2325-L1	pE	dex. distal ulna fragment
Marale 1 (sur-round--ings FVL-15)	surface; pebbly sandstone matrix	C1/23/171086	pE	sin. distal femur fragment
	surface	C1/23/171086	pE	sin. proximal humerus fragment
	surface	C1/23/171086	pE	sin. distal scapula fragment
FVL-13	surface	BC-2969	pE	proximal femur fragment
Marale 3 (FVL-17)	surface	C3/27-B/201086	pE	dex. distal humerus fragment
	surface	C3/28-83	pE	sin. proximal humerus fragment
FVL-12	surface	BC-3033	pE	vertebra fragm.: processus spinosus
	surface	BC-3034	pE	sin. humerus fragm.: prox.epiphysis fragment
FVL-24c; excavation	in situ	LR-2591	pE	corpus vertebrae, lumbare
	surface	LR-2603	pE	distal scapula fragment
	surface	LR-2609	pE	distal femur fragment
	surface	LR-2620	pE	sin. distal ulna fragment
	in situ	LR-2785-87	pE	distal scapula fragment
	in situ	LR-2706	pE	corpus vertebrae, lumbare
	in situ	LR-2708	pE	proximal epiphysis of dex. humerus (epiphysis fused)
	surface	LR-2709	pE	dex. humerus fragm.: distomedial condyle
	in situ	LR-3500	pE	dex. fibula, lacking proximal epiphysis (juv.: both epiphyses not yet fused)
	in situ	LR-3546	*S. sompo-ensis*	dex. radius (juvenile: proximal epiphysis not yet fused)
	in situ	LR-3552	pE	dex. metatarsus III
	in situ	LR-3554	pE	epiphysis, ilium?
	in situ	LR-3555	pE	dex. cuneiforme secundum
	in situ	LR-3563-65	pE	vertebra thoracale, including processus spino-sus and dex. processus transversalis
	surface	LR-3610	pE	costa fragment
	in situ	LR-3691	PE	third phalanx of finger or toe
	in situ	LR-3706	pE	dex. humerus fragm.: prox.epiphysis (fused symphysis)
	in situ	LR-3707	*St. sompo-ensis*	dex. humerus proximal + diaphysis + median condyle.

Table 6

	surface	L-3966/ 3969	*St. sompo-ensis*	dex. pelvis fragment: anterior part of acetabulum + corpus ossis ilium
loc.21 (c. 700 m E of FVL-15)	surface	ABTL/161186-1	pE	proximal epiphysis of dex. humerus, not yet fused
unknown loc.	surface	D2-35/86	pE	sin. distal femur fragment
(MPC)	surface	A1-2/85	pE	sin. proximal tibia fragment

Large-sized Elephantoidea postcranial elements

Locality	Circumstances	Coll. no.	Taxon	Element
FVL-29 (Tanrung River)	found in small gully eroding top layers of Tanrung Formation (semi in situ)	TA-3063	*Stegodon*	sin. proximal humerus fragment
		TA-3064	Elephantoidea	corpus of vertebra thoracale
		TA-3065	Elephantoidea	corpus of vertebra thoracale
		TA-3066	Elephantoidea	corpus of vertebra thoracale
		TA-3067	*Stegodon*	dex. proximal tibia fragment
		TA-3068	Elephantoidea	sin. distal scapula fragment
	semi-in situ	TA-3725	Elephantoidea	dex. distal scapula fragment
FVL-29	surface; sandy matrix distinct from Tanrung Fm.	TA-3061	*Elephas*	dex. metacarpus III
		TA-3062	*Elephas*	dex. metacarpus V

Table 7. List of all fossil material attributed to *Stegodon sondaari* sp. nov. The specimens indicated as having been excavated in situ (right collumn) all originate from a single level pertaining to Member A of the Ola Bula Formation, near the locality Tangi Talo, Ngada District, West Central Flores. The numbers and letters in the last collumn indicate small excavation areas along the fossiliferous level at Tangi Talo. Specimens with GRDC collection numbers starting with the lettercode TT are all paratypes, except TT-3837, which is designated as the holotype mandible with dentition. The TT-numbers were collected during joint expeditions by the NNM and GRDC in 1992 and 1994. One pair of lower dP_3's (OB-5) were collected on the surface by Hartono in 1960 in the same area and attributed by Hooijer (1964: 51) to a pygmy *Stegodon*. One posterior M_3 fragment from the Hartono collection (OB-3) was identified as a dP_4 fragment of *S. trigonocephalus florensis* by Hooijer (1967: 156), but is here determined as a posterior M_3 fragment of *S.* cf. *sondaari* sp. nov. The remaining specimens were collected in 1980 by Sondaar during a joint expedition of the IESU, the Institute for Technology, Bandung (ITB) and the University of Basel. The specimens indicated with [1] (left column) all belong with certainty to the dentition of one individual. The mandible and lower dentition of this individual represent the holotype of *S. sondaari* sp. nov. Other specimens that certainly belong to single individuals are indicated with the signs \ and /. Based on the comparison of dental wear stages, the molar remains can be attributed to a minimum of 12 different individuals, which have been numbered from 1 to 12 (second column). For the dental elements the third column gives the plateformula of complete molars, or the number of ridges preserved in incomplete ones. The fourth column indicates how many ridges are worn, starting from the front.

Dental elements

Element	Coll. no.	Indiv. no.	Plateformula	Wear stage	Side	Circumstances
dP4 sup.	TT-4033\	7	x7 or x6x	1 worn	dextral	in situ 2
	TT-4034/	7	x7 or x6x	1worn	sinistral	in situ 2
	TT-4032	8	7x or x6x	4 worn	sinistral	in situ C
	TT-3836	9	7x or x6x	4 worn	dextral (+ maxilla fragm.)	in situ 5
M1 sup.	TT-4037\ [1]	1	-7 or -6x	all worn	sinistral	in situ C
	TT-4035/ [1]	1	-7 or -6x	all worn	dextral	in situ A
	TT-4036	2	x6x	1 worn	sinistral	in situ 2
M2 sup.	TT-4030\ [1]	1	x7x	4 worn	sinistral	in situ C
	TT-4031/ [1]	1	x7x	3 worn	dextral	in situ C
	TT-3818\	3	x7 or x6x	1 worn	dextral	in situ 3
	TT-3814/	3	x7 or x6x	0 worn	sinistral	in situ 3
	F.BS4.1	12	-6x	(1)5 worn	sinistral	with tuff matrix
M3 sup.	TT-3856	10	-6x	all worn	sinistral	in situ
dP3 inf.	TT-4044	11	-5x	all worn	sinistral	in situ 5
	OB-5 (Hooijer, 1964: fig.1)\	(13) (13)	6 6	all worn all worn	sinistral dextral	surface surface
dP4 inf.	TT-3835	2	-5x	all worn	sinistral	in situ 5
M1 inf.	TT-3837B [1]	1	-3x	all worn	dextral; (in mandible)	in situ 3
	TT-3837A [1]	1	-6x or -7	all worn	sinistral; (in mandible)	in situ 3
	TT-3815	8? or 9?	x5-	0 worn	sinistral	in situ 3
M2 inf.	TT-3816	3	x8x	2 worn	dextral	in situ 3
	TT-3837B\ [1]	1	x8x	3 worn	dextral; (in mandible)	in situ 3
	TT-3837A/ [1]	1	x8 or x7x	3 worn	sinistral; (in mandible)	in situ 3
	TT-4028	4	-7x = (1)7x	3 worn	dextral.	in situ C
	TT-4029	5	(x)8 or (x)7x	all worn	sinistral	in situ
M3 inf.	TT-3837A [1]	1	x8-	0 worn	sinistral; (in mandible)	in situ 3
	TT-4041	6	?	all worn down to root	dextral	in situ

Molar fragments of uncertain rank

Element	Coll. no.	Plateformula	Wear stage	Side	Circumstances
M inf.	TT-3839	x5-	5 w	dextral	in situ 3
M sup.	TT-3813	-5x	all w	sinistral	surface 2
sup. or inf. (M1-M3)	TT-3831	-2x	?	?	semi in situ 2
	TT-3828	-1-	?	?	in situ 2
	TT-3838	-1-	?	?	in situ 3
	TT-3834/TT-49	molar fragment	?	?	soil 5
	TT-4038	ant. molar fragm., worn to root., perhaps same specimen as TT-4037	?	?	in situ C
	TT-4039/TT-40	(-3-)	?	?	in situ A
	TT-4042	-1x	?	?	in situ
	TT-4043	-3	?	?	in situ
	TT-4047	-1x	?	?	in situ
	TT-4050	-1-	?	?	surface
	TT-4051	-1-	?	?	surface

Table 7

	TT-4068	-1-	?	?	in situ 2

Tusks

Coll. no.	Element	Circumstances
TT-3887/TT-3888	sin. tusk, subadult, from tip to pulpa cavity	semi in situ 3
TT-3819	sin. tusk, distal portion	semi in situ 3
TT-3812	tusk fragment, proximal portion (pulpa cavity), adult	surf.3
TT-3821	small tusk fragment	in situ 5
TT-3843	small tusk fragment	in situ 5
TT-3862	small tusk fragment	in situ 5
TT-3866	small tusk fragment	in situ 5
TT-4059	small tusk fragment	in situ
TT-4067	small tusk fragment	in situ

Cranial elements

Coll. no.	Element	Circumstances
TT-3837 [1]	Mandible with both M_1, M_2 and the M_3 sin. (molars also listed also above separately)	in situ 3
TT-3817	sin. maxilla fragment with ant. part of alveole	in situ 3
TT-4069	dextral mandible fragment, juv., with alveoli for dP_2, dP_3 and dP_4.	in situ 2
TT-3848	pneumatic skull bone fragm.	semi in si. 3
TT-4060	dextral mandibular symphysis fragment	in situ
TT-4061	dextral mandibular symphysis fragment	surface
TT-3836	dextral maxilla fragment with dP^4 (also listed under dP4 sup.)	in situ 5

Postcranial elements

Coll. no.	Element	Circumstances
TT-4065	phalanx	surface
TT-4078	dorsal spine of vertebra thoracale	in situ
TT-4082	vertebra thoracale, posterior region	in situ
TT-4083	femur diaphysis	in situ
TT-4086	vertebra thoracale, anterior region	in situ
TT-4115	vertebra thoracale fragment	surface
TT-3844	atlas fragment	in situ
F.BS-3.1	atlas	matrix of Tangi Talo wh/pnk tuff
F.BS 3.2	vertebra thoracale, anterior region	
F.BS 3.3	vertebra thoracale, posterior region	
F.BS 3.4	processus spinosus of vert.thor., anterior region	
F.BS 3.5	processus spinosus fragment	
F.BS 3.6	processus spinosus fragment	
F.BS 16.1	processus spinosus fragment	
:TT-3850	Costa fragment with articular facets	in situ 3
TT-4089		in situ
TT-4092		in situ
TT-4101		in situ
F.BS 3.7		?
F.BS 3.8		?

Stegodon cf. *sondaari* sp. nov.

Coll. no.	Element
OB-3 (Hooijer, 1967: 156)	posterior fragment of lower M_3

Table 8. List of fossil material of *Stegodon florensis* Hooijer, 1957 originating from the Soa Basin, Ngada District, West Central Flores, Nusatenggara Province, East Indonesia.
A: Fossils originating from the locality Boa Leza; B: Fossils originating from the locality Ola Bula; C: Fossils originating from Mata Menge; D: Fossils originating from other localities in the Soa Basin.

A: Fossils collected by Verhoeven 1959-1968 at the locality Boa Leza (except one metatarsal, collected by Hooijer in 1970).

Element	Described by:
sinistral dP_3 fragment	Hooijer 1967: 156
sinistral M_1	Hooijer 1967: 157
dextral mandibular ramus with dP_4 remnant and M_1	Hooijer 1972a: pl. 2, fig. 3.
sinistral upper and lower M3's, dextral M^3 and dextral mandible fragment with M_2 remnant and M_3 ,and tusks, all of one individual (collected in situ)	Hooijer 1972a: pl. 1, figs. 1-4.
Sinistral worn M^3	Hooijer 1972a: pl. 2, fig. 2
sinistral posterior M_3 fragment	Hooijer 1972a: pl. 3, fig. 6 (spec.j)
sinistral posterior M3 fragment	Hooijer 1972a: 21, specimen k
dextral posterior M_3 fragment	Hooijer 1972a: 21, specimen f
atlas	Hooijer 1972a: 22
dextral lunare	Hooijer 1972a: 23
sinistral unciforme	Hooijer 1972a: 23
dextral unciforme	Hooijer 1972a: 23
sinistral naviculare	Hooijer 1972a: 24
sinistral naviculare fragment	Hooijer 1972a: 24
dextral metatarsal IV (collected by Hooijer in 1970)	Hooijer 1972a: 24

B: Fossils collected at the locality Ola Bula.
B1: collected by Verhoeven between 1956 and 1968 and described by Hooijer (1957, 1972a).

Element	Described by:
mandible fragment with fragments of sinistral and dextral M_3's (holotype)	Hooijer 1957: pl. II, figs. 1-2.
posterior fragment of sinistral M^3	Hooijer 1957: pl. III, figs. 1-2.
posterior fragment of dextral M_3 \	Hooijer 1957: pl. III, figs. 3-4.
posterior fragment of sin. lower M_3/ pair with foregoing	Hooijer 1957: pl. III, fig. 5.
sinistral magnum	Hooijer 1972a: 23
dextral unciforme	Hooijer 1972a: 23
sinistral patella	Hooijer 1972a: 23
sinistral patella	Hooijer 1972a: 24
atlas fragment	Hooijer 1957: 125
epistropheus fragment	Hooijer 1957: 125
vertebra thoracale	Hooijer 1957: 125
processus spinosus of vertebra thoracale	Hooijer 1957: 125
dextral humerus (incomplete)	Hooijer 1957: 125
proximal fragment of sinistral ulna	Hooijer 1957: 125
dextral pelvis fragment	Hooijer 1957: 125
caput of femur	Hooijer 1957: 125
proximal fragment of femur	Hooijer 1957: 125
CV no nr. distal fragment of femur	Hooijer 1957: 125
distal fragment of femur	Hooijer 1957: 125
distal fragment of sinistral tibia	Hooijer 1957: 125
sinistral epiphysis of tibia, juvenile	Hooijer 1957: 125

B2: Fossils collected during the 1980 IESU/ITB/Basel expedition (numbers with prefix C.S.) and by the NNM/GRDC expeditions 1991-1994 (numbers with prefix GRDC).

Coll. no.	Element	Remarks
C.S. F.BL-10.1	dextral M^3	
C.S. F.BL-10.3	dextral M^3 \	one pair with next specimen
C.S. F.BL-10.2	sinistral M^3 /	
GRDC F/OB3801	M^1 or M^2	(in situ, but c. 200 m E of excavation Verhoeven)
GRDC F/OB3803	posterior fragment of M^1	(surface collected c. 250 m SE of Ola Bula)

GRDC F/OB3802	posterior fragment of sinistral. M_1	(surface collected c. 250 m SE of Ola Bula at same stratigraphic level as Ola Bula excavation of Verhoeven)
GRDC F/OB3800	posterior fragment of sinistral M^3	(surface collected, downslope S of Ola Bula plateau)
GRDC F/OB3806	distal fragment of sinistral humerus	(surface collected at Ola Bula near exc. Verhoeven)

C: List of *Stegodon florensis* fossils collected at Mata Menge. C/1 to C/4: during the GRDC/NNM 1991-1994 excavations, all excavated in situ and described in this thesis.

C1: Fossils originating from the siltstone interval of Unit 1.

GRDC no.	Element	Coordinates	Prepared
MM4119	sinistral ulna diaphysis	C+98; 0-49; R-85	+
MM4127	sin. trapezoideum	F+58; 1+40; R-95	+
MM4130	long bone fragment	D+2; 0+41; R-103	
MM4132	long bone fragment	E+73; 1+10; R-112	
MM4133	small tusk fragment	H+20; 1+87; R-124	
MM4134	small costa fragment	H+22; 2+20; R-126	
MM4135	small tusk fragment	D+1; 0+39; R-93	
MM4136	small bone fragment	C+44; 0+75; R-103	
MM4137	small bone fragment	E+10; 0+50; R-105	
MM4141	small costa fragment	D+44; 0+76; R-105	
MM4147	dextral lunatum	quadrant H-I/1-2	+
no number	tusk, proximal portion, very broken not brought to Bandung	C+40; 0-7; R-80	
no number	tusk, distal portion, very broken not brought to Bandung	C+0; 0-9; R-86	

C2: Fossils originating from the siltstone/sandstone transition of Unit 1.

GRDC no.	Element	Coordinates	Prepared
MM4118	dextral. M^3, posterior fragment	H+29; 0+53; R-119	+
MM4120	dex. femur complete but epiphyses poorly preserved	C+95; 0-24; R-114	
MM4121	processus spinosus of vertebra thoracale	C+93; 0-42; R-119	+
MM4125	small costa fragment	D+6; 0-5; R-118	
MM4126	atlas fragment	quadrant I-J/3-4	
MM4129	costa fragment	quadrant I-J/3-4	
MM4131	costa fragment	quadrant H-I/0-1 close to MM4118	
MM4140	molar ridge fragment	B+76; 0+48; R-129	
MM4142	dextral patella	B+90; 0-21; R-119	+
MM4145	small bone fragment	quadrant C-D/-1-0	
MM4146	dex. pelvis large fragment including ilium, pubis, acetabulum	I+5; 2+73; R-150	+
MM4148	small costa fragment	C+25; 0-18; R-130	
no number	sin. humerus complete but poorly preserved	C+52; 0-47; R-111	
no number	pelvis, sin., dex. but very fragmented and crushed, not brought to Bandung	C+20; 0+27; R-110	

C3: Fossils originating from the sandstone interval of Unit 1.

GRDC No.	Element	Coordinates	Prepared
MM3901	tusk, distal portion complete; proximal part fragmented	G+50; 3+10; R-185	+
MM4123	small tusk fragment	C+47; 0+25; R-165	
MM4124	small tusk fragment	close to MM4123	
MM4149	small bone fragment	?	
MM4155	small costa fragment	?	
F/M3807	dextral tibia	30 cm above base Unit 1	+

C4: Fossils originating Unit 1, unknown provenance.

GRDC no.	Element	Approximate position	Prepared
MM3902	vertebra thoracale, processes broken	near MM3901 but higher in profile	+
MM3903	vertebra thoracale, processes broken	near MM3901 but higher in profile	+
MM3904	long bone fragment	near MM3901 but higher in profile	
MM4122	vertebra fragment	?	

Table 8

MM4128	bone fragment	?	

C5: Fossils collected by Verhoeven between 1959-1968; some specimens in this collection may have been surface collected.

CV no.	Element	Described by Hooijer, 1972a
no number	dextral M^1	pl. 3, fig. 4
no number	anterior fragment of sinistral M_3	pl. 2, fig. 1
122	fragment of M^2	p. 22
73	posterior fragment of dextral M^1	p. 22
no number	posterior fragment of dextral dP_4	p. 19
72	dextral humerus	p. 23
32	sinistral ulna	p. 23
58	dextral femoral diaphysis	p. 23
28	dextral lunare	p. 23
no number	sinistral astragalus fragment	p. 24
59	dextral calcaneum, juvenile	p. 24

D: Other localities in the Soa Basin.

Locality	Element	Described by:
Menge Ruda	posterior fragment of sinistral M_3	Hooijer 1972a: 21, specimen c
Menge Ruda	posterior fragment of sinistral M_3	Hooijer 1972a: 21, specimen e
Menge Ruda	posterior fragment of sinistral M_3	Hooijer 1972a: 21, specimen h
Menge Ruda	anterior fragment of dextral M^3	Hooijer 1972a: 20
Menge Ruda	fragment of dextral M_3	Hooijer 1972a: 20
Dhozo Dhalu	mandible with remnants of both M_1's and complete M_2's (GRDC no. DD-4160; in situ)	this thesis
Mata Menge or Boa Leza	posterior fragment of sin. M_3	Hooijer 1972a: 21, specimen d
Mata Menge or Boa Leza	posterior fragment of sin. M_3	Hooijer 1972a: 21, specimen i
loc. unknown	posterior fragment of dex. M_3	Hooijer 1972a: 21, specimen g

Table 9. Size measurements (in mm) of the lower M_3 in *Stegodon elephantoides* (Clift, 1828) mandible PMS-358 from Bukuran, Sangiran area, and various other Stegodontidae M_3's for comparison. For explanation of the measured parameters see Figs. 4-6.

Taxon	*S. elephantoides*	Stegol. stegodont	*S. elephantoides*		*S. bombifrons*	*S. insignis*	*S. tr. praecursor*
Specimen	PMS-358	CD-3133-3140	BMNH-10516 (lectotype)	BMNH-14759	BMNH-2991	BMNH-3032	GRDC-K133
N	-½8x	-½6x	x9x or x10	(x1)8x	(x)9x	x12x	x11x
L	243+; 280e	200+	294	324+	316	310	248
W	85	100	93e	115	115	91.5	83
H	-	56e	59	52.5+	46+	53+	50+
LF	3.9	3.3	3.3	2.6	3.1	3.8	4.8
ET	4.3 - 6.5	7-8	4.9 - 5.4	3.6 - 5.5	6.5 - 6.7	4.1 - 5.0	3.5 - 4.2
h/w	-	61	58 - 63	48	-	62+	55+
L/W	3.3e	-	3.16	-	2.75	3.39	2.99
EA	12	0	1	1	1	23	12
EF	1.5 - 3	0	2 - 3	1.5 - 3.5	0 - 2	2.5 - 3	2 - 4
Dig.	-	45	57	58	78	7-10	9
w post.x	20+	41		38.5	53	12	38(c)
w I	57+	82	56	105.5	85	50(c)	53(c)
w II	70+	92	81e	105.5	-	62.5(c)	67.5(c)
w III	76	95	88e	113.5	113.5	76.5(c)	73(c)
w IV	80	-	92e	115	114	80.5(c)	76(c)
w V	81.5	100	93e	113	115	85.5(c)	80.5(c)
w VI	85	-	93	107	111	87.5(c)	81.5(c)
w VII	77+	-	93	103e	104	90(c)	83(c)
w VIII	-		92	90+	-	91.5(c)	79.5(c)
w IX	-		86	-	-	90	75(c)
w X			82			88	69(c)
w XI						87	65.5
w XII						-	
w ant.x	-		51		-	-	49

Table 10. Size measurements taken on various M3's from Java of small-sized *Stegodon* individuals and forms. Specimen GRDC/K-133 is the type specimen of *S. trigonocephalus praecursor* von Koenigswald, 1933. For an explanation of the measured parameters see Figs. 4-6.

Specimen	CD/2296-2187	CD-2896	GRDC/K-391	GRDC/93.L	GRDC/K-133
Locality	Java	Trinil	Cirebon	Java	Bumiaju
N	x10(1)	x13	x9	x11x	x11x
L	220+	253	218	238	248
W	69	71e	72e	71.5	83
H	40e	48e	43	45	50e
LF	5.4	5.0	4.2	4.9	4.8
ET	3.7-5.0	-	4.0-5.0	4.2-4.7	3.5-4.2
h/w	52-58	68-74	60-61	57-63	55+
L/W	-	3.56	3.03	3.33	2.99
EA	1-3	1	-	1-2	1-2
EF	2.5-4.5	2.5-4	-	2-3	2-4
Dig.	9	7-10	4-7	6-8	9
width/heigth of successive ridges:					
ant. x	46/-	40/-	51/-	-/-	49/-
1	63.5e/-	59.5/-	68/-	-/-	65.5/-
2	66e/-	65.1/48	68e/-	58/-	69c/-
3	67/-	70e/49	72e/-	65/-	75c/-
4	68/-	71e/48e	70e/39.5	69.5/-	79.5c/-
5	69/-	-/48	70/43	71.5/43.5	83c/-
6	68.5/40e	-/-	70.5/42	71.5/45	81.5c/-
7	68.5/35.5	-/-	64.5/40	71/40	80.5c/42+
8	67/35	-/-	58/40	66e/39.5	76.5c/50+
9	62.3/39	-/-	43/39	62.5/35.5	73c/47c
10	52e/42	-/-		57/31.5	67.5c/43c
11	-/-	-/49		46.5/29.5	53c/44.5c
12		-/48.5			
13		50.5/40.5			
post. x				15/20	38c/30c

Table 11. Biometrics of *Stegodon* molar material from late Middle Pleistocene terraces along the Solo River in Central and East Java.
A: Measurements and morphological features of *Stegodon* molars from the Ngandong terrace excavations, collected by the Geological Survey of the Dutch East Indies (GSDEI) between 1931 and 1933, and presently housed in the GRDC Collection. Only specimens with the original labels are included.
B: Summary biometrics of *Stegodon* molars from the Ngandong excavations and from some other excavations in terrace fills along the Solo River (Watualang, Ngrenjengan) and of presumably comparable age. All material was excavated by the GSDEI during the nineteenthirties and is presently housed in the GRDC. Only specimens with the original labels have been included. All the material is attributed here to *S. trigonocephalus ngandongensis* subsp. nov. For explanation of the measured parameters see Figs. 4-6.

A

GRDC No.	K-363	K-330B	K-351	K-351	K-320
Element	M^1	dP_3	dP_3	dP_4	dP_4
N	(x)8x	x7x	7	x5-	x6½-
L	160e	73	63	-	98+
W	77e	41	37	48+	47.5
H	52c	23.5	-	30+	31e
LF	5.3	11.0	10.5	7.5	7.5
ET	2.6 - 2.8	-	1.4	2.4	1.1 - 1.3
h/w	60e - 66	54 - 74.5	-	63 - 69.5	60 - 65
L/W	2.08e	1.78	1.70	-	-
EA	2 - 3	-	1 - 2	-	-
EF	3 - 4	-	4 - 5	-	-
Dig.	10 - 14	9 - 15	-	9 - 10	9 - 11
width/heigth of successive ridges (in mm):					
ant. x	- / -	23 / 18		29.5/ 20.5e	32.5/ 18.5
1	- / -	29 / 20	- / -	38 / 24.5e	38 / 27
2	- / -	26.5/ 20	- / -	41.5/ 27.5e	42.5/ 26
3	72.5e/ -	30 / 22.5	- / -	43 / 30	43 / 26
4	77e / -	36 / 22	30.5/ -	46 / 29	46 / 28
5	77c / -	39.5/ 23.5	36e / -	48 / 30	47.5/ 28.5
6	76.5c/ 46e	41 / 23	37e / -	- / -	47.5/ 30.5
7	75.5c/ 50c	38 / 23	30.5/ 23		- / -
8	64c / 52c				
post. x	41c / 40	29.5/ 18			

B

dP3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
inf.	Range	7/x7x	60e-73	35-41	18-23.5	9.8-11.0	1.70-1.79	1.4-1.6	54-75	12/13	35/45	-
	n	3	4	4	2	4	3					
	Mean	7.0	65.8	37.5	20.8	10.3	1.76					

Table 11

	SD	0	4.86	2.18		0.47	0.04					
	CV	0	7.86	6.18		4.79	2.48					
dP4												
	Range	-7x/(1)8x/x9x	120e-124	47.5-50	29-31e	7.5-8.1	2.37e-2.48	2.0-2.5	56-70	12	46/47	7/89/9-10/9-11
	n	2	3	3	2	5	3					
inf.	Mean	9.0	121.3	49.2	30.0	7.7	2.41					
	SD		1.88	1.18		0.22	0.05					
	CV		1.68	2.60		3.05	2.15					
M1												
sup.	Range	(x)8x	160e	77e	52	5.3	2.08e	2.6-2.8	60e-66	23	34	10+
	n	1	1	1	1	1	1					
	Range	9-	-	-	40	7	-	2.9	60-72	-	-	89
inf.	n				1	1						
M3												
	Range	x2½-	-	95+	-	4.3	-	4.5-5.0	-	12	24	-
sup.	n					1						

Table 12. Size measurements (in mm) and morphological features of Late Pleistocene *Elephas maximus* molars from Cipunduy sandquarry, Padalarang, West Java. For an explanation of the measured parameters see Figs. 4-6.

GRDC no.	CPD90-1	CPD90-2	CPD90-3	CPD90-36	CPD114
Element	sin. M_2	dex.M^1 or M^2	dex.M^1	M_3	sin.M_2
N	12-	x5-	-6-	x3-	x16x
L	181+	-	-	-	290
W	71	70	66	-	75.5
H	127	-	134	-	149e
LF	5.9	7.9	8.0	-	5.4
ET	2.0	1.5-1.8	1.6-1.8	1.8-2.7	2.0-2.3
h/w	178-184	196+	191e-208	-	188-210+
H/W	-	-	-	-	197e
L/W	-	-	-	-	3.84
EA	2-4	3-4	-	3-5	2-5
EF	4-5	2.5-4.5	-	2-4	3-4
Dig.	?	-	6	-	6
width/height of successive ridges:					
ant.x		44c/-		49c/-	-/-
1	40/-	64.5c/-		67.5c/-	-/-
2	57c/-	69.5c/-	65.5/-	82e/-	54/-
3	63c/-	70c/-	66/128+	-/-	64c/-
4	67c/-	69c/-	65.5e/133		68.5c/-
5	70c/-	68c/133+	64.5/134		71.5c/-
6	70.5c/-	-/-	63.5/131		74c/100+
7	69.5c/-		63/121e		75.5/119+
8	69c/122e				72.5/130+
9	71/127				73/140+
10	-/123				70.5c/148+
11	65/119.5				71.5c/149e
12	62/112				71c/146.5
13	-/-				69.5c/140.5
14					70/131.5
15					65/125e
16					43/120e
post.x					29/91

Table 13. Size measurements (in mm) of *Stegodon elephantoides* (Clift, 1828) mandible PMS-358, originating from Bukuran, Sangiran area, Central Java, and some other *Stegodon* mandibles for comparison. For measurement definitions see Fig. 8. PMS-358 represents a very old individual because all ridges of both M_3's are worn. The NNM collection numbers of specimens CD-12819 and CD-12812 are new; the old numbers referred to in Hooijer (1955) are CD-2895-4255 and CD-3443-3444 respectively. The dental wear stage for each mandible is indicated as the number of molar ridges touched by wear starting at the front in the most posterior worn molar present in the jaw (for example: 3 r. M1 = 3 anterior ridges of M1 worn). Values followed by '+' are minimum values on incomplete specimens and measured as far as preserved. Estimated values are followed by 'e'.

Taxon	*Stegodon*	*trigonocephalus*			*S. elephantoides*
Locality	Bukuran	Trinil	Kedung Brubus		Burma
Specimen	PMS-358	CD-12819	CD-12812	CD-3442/3445	BMNH-10516
Wear stage	M3 C'	M3 C/C'	M2/M3 B	M2/M3 A	M2/M3 A
M1	660	500e	-	-	-
M2	520	320+	312+	-	-
M3	335	-	-	-	-
M4	395	-	-	-	-
M5	170	169	203	205	155
M6	130	124	131	135	130
M7	190	135+	-	180e	-
M11	740	510+	-	-	-
M12	480	-	-	-	-
M13	97	-	-	-	-
M14	110	-	-	-	-
M15	600	460	-	-	-
M16	645	-	-	-	-
M17	120	105	-	-	-
M18	225	150	172	170	190e
M19	110	93	-	-	-
M20	115	69	90	90	110
M21	286	150e	-	-	-
M22	105	112	-	-	-
M23	79	95	-	-	-
M24	210e	190	220	210	190e
M25	77	80	73e	70e	61
ratios					
M25/M18	0.34	0.53	0.42e	0.41e	0.32e
M21/M18	1.27	1.00e	-	-	-
M20/M5	0.68	0.41	0.44	0.44	-
M6/M18	0.58	0.83	0.76	0.79	0.68e
M5/M18	0.76	1.13	1.18	1.21	0.82

Table 14. Size measurements (in mm) of the mandible material attributed to *Stegodon sompoensis* Hooijer, 1964 from the Beru Member of the Walanae Formation (SW Sulawesi), and to *Stegodon* sp. B from the Tanrung Formation (SW Sulawesi) and from the Pintareng Formation (Sangihe). Definitions of the measurements after Beden (1979), though with different lettercodes (see Fig. 8 for explanation). The dental wear stage for each mandible is indicated as the number of ridges touched by wear starting at the front in the most posterior worn molar present in the jaw (for example: 3 r. M1 = 3 anterior ridges of M1 worn). The dental wear stage of specimen PS-63, which lacks molars, is interpreted on the basis of the associated upper dentition. Measurement values followed by '+' indicate minimum values taken on incomplete specimens and measured as far as preserved. Estimated values are followed by 'e'.

	Stegodon sompoensis				*Stegodon* sp. B	
Coll. no.	C 3/2/79	CMTL/271285-1	MUTL/171186-1	BC-2990	TA-3723	PS-63
Wear stage	2 r. M3	9 r. M3	7 r. M3	8 r. M2	? r. M3	? r. M2
Measurement, lateral side						
M1	-	320+	-	-	-	-
M2	310	-	-	-	-	-
M3	125+	175e	-	-	-	-
M4	-	160e	-	-	-	-
M5	-	100e	95e	-	-	130e
M6	82	85	-	90e	104e	100e
M8	125	-	-	-	-	-
M9	40	-	-	-	-	-
Measurement, superior side						
M13	44	-	-	-	-	-
M14	43	-	-	-	-	-
M18	103	115	104	105e	115+	-
M20	-	50	48e	-	-	-
M24	-	141	92	-	-	-
M25	-	56	50.5	55e	-	-
ratio						
M25/M18	-	0.49	0.49	0.52e	-	-

Table 15. Size measurements (in mm) of the mandible material of *Stegodon sondaari* sp. nov. from Tangi Talo, Flores, as compared to some other *Stegodon* mandibles from Java, Timor and Flores. Measurement definitions are taken from Beden (1979), though with different lettercodes (see Fig. 8). For explanation of the dental wear stage and other codes used see Table 14. Measurements of the *S. timorensis* Sartono, 1969 mandible were taken on a cast of the original specimen from Weaiwe, Timor, figured by Hooijer (1969a: pl. 1). The *S. florensis* Hooijer, 1957 holotype mandible is from Ola Bula, Flores, and is figured in Hooijer (1957a: pl. II, figs.1-2).

	S. sondaari	*S. trigonocephalus* (Java)				*S. timorensis*	*S. florensis*	
Specimen	TT-3837	CD-122	CD-2892	CD-2897	CD-2896	Weaiwe(cast)	holotype	DD-4160
Wear stage	(2 r.M2)	(6 r. D3)	(5 r.D4)	(3 r.M1)	(2 r.M3)	(4 r.M3)	(6/7 r.M3)	(3 r. M2)
Measurements								
M1	245e	-	300+	394+	456+ (460e)	-	320+	350+
M2	225	-	270+	170+	350+ (390e)	-	-	240+
M3	94+ (99e)	-	148+	188+	210+	-	-	155+
M4	140	-	158+	-	-	-	-	175
M5	68	68e	97	115	135	85	115e	110
M6	52e	45	66	79	99	67	78	75
M7	68	-	105	126e	150e	86	-	125
M11	220e	-	312+	382+	494+ (510e)	-	402+	370+
M12	150e	-	-	-	-	-	-	-
M13	31	-	-	-	-	-	-	-
M14	36	-	-	-	-	-	-	-
M15	174e	-	251	299	400	225	370	-
M16	218e	-	252+	-	-	-	-	-
M17	-	-	71	68	82	49	87	-
M18	65e	60	90	111	134	85	135	105
M19	43	-	58	66	85	47	75e	-
M20	51	32e	40	54	65	37	65	55
M21	41	-	75	95e	105e	46	87e	85
M22	54	-	53	69	104e	63	-	-
M23	-	-	50	56	71	39	72	-
M24	103	67e	97e	129	170	99	160	118
M25	40	29	34	44	60	37	60	40
M25/M18	0.62e	0.48	0.38	0.40	0.45	0.44	0.44	0.38

Table 16. Size measurements (in mm) of *'Elephas' celebensis* (Hooijer, 1949) skull GRDC no. LWTL/151186-1 and of the skull fragment of the same species described earlier by Hooijer (1972b; measurements taken from this paper). For comparison the measurements of two *Elephas planifrons* skulls from the Siwaliks (BMNH B-3060 is the skull designated by Maglio (1973) as lectotype of that species; the other specimen (CD-4963) has been figured and described by Hooijer (1955b); measurements on both skulls were taken during the present study). Definitions of the measurements are after Beden (1979) and are shown in Fig. 7. The dental wear stage for each skull is indicated as the number of lamellae touched by wear starting in the most posterior worn molar in the jaw (for example: 3 l. M1 = 3 anterior lamellae of M1 worn). Measurement values followed by '+' are minimum values taken on incomplete specimens and measured as far as preserved. Estimated values are followed by 'e'. In various cases values of transverse measurements were based on measurements taken on one half of the skull and multiplied by two.

Taxon	*'E.' celebensis*		*E. planifrons*	
Specimen	GRDC LWTL/151186-1	(Hooijer, 1972b)	BMNH M-3060 lectotype skull	CD-4963
Wear Stage	9 l. M3	6 l. M3	6 l. M3	8 l. M3
Measurements				
La	520	-	590+	650+
Lb	150+	-	275	280
Lc	150	-	290	280
Ld	50e	-	95e	65
Le	330e	-	-	-
la	½la=240: 480	-	½la=280: 560	½la=280: 560
lb	150	-	350	345
lc	½lc=184: 370	-	½lc=320: 640	½lc=330: 660
ld	185	195	320	300
le	180	-	-	-
lf	207+	-	-	-
lg	-	-	70e	75
lh	170e	-	220	195
Ha	335	-	345+	310
Ha'(basion-vertex)	265e	-	300	255
Hb	-	-	0	30
Hc	-	-	180	150e
lj	70	-	80	100
lk	125	130	½lk=85: 170	½lk=97: 195
ll	38	-	65e	76
Aa	245	-	210e	215
Ab	270e	-	290e	-
Ac	115e	-	130	-
Ad	400	-	380	445
Ae	470e	-	-	-
Af	350e	-	-	-
Ag	470	-	440e	-
Ah	270e	-	285e	-
Aj	83	-	110	100
ln	½ln=330:.460	-	505	½ln=247: 495
lo	410	-	520	-
lp	240	-	230	½lo=110: 220
lq	½lq=270e: 540e	-	-	-
lr	58	-	45	70e
ls	84	66	70	½ls=41e: 82e
lt	½lt=85: 170	170	½lt=110: 220	215

Table 16

lu	54	-	50e	-
lv	23	-	25	36
Lf	610e	-	635+	640+
Lg	210	-	210	-
Lh	240	-	305	-
Lj	150	-	145	-
Ba	120e	-	175	185
Bc	107	-	-	90
DAP tusk alveole	64	60	48	48
DT tusk alveole	51	60	50	57
lw	40e	-	-	-
lx	100	-	-	-
Lm	260e	-	-	-

Table 17. Size measurements (in mm) of various skull(s) (fragments) attributed to *Stegodon sompoensis* Hooijer, 1964 (GRDC nrs. BC-3050 and L-III-3036, and MPC nr.C1/23/6-9-86:246) and the holotype skull of *S. trigonocephalus* Martin, 1887 (juvenile specimen) from Java and *S. ganesa* (Falcon & Cautley, 1847) skull BMNH-M3008 (adult specimen) from the Siwaliks for comparison. Definitions of the measurements are taken from Beden (1979) and shown in Fig. 7. For explanation of the dental wear stage and other codes used, see Table 14. "[1]" = measurement from Martin (1884: 15); "[2]"= value taken on partially reconstructed skull portion.

Taxon	*S. sompoensis*			*S. trigonocephalus*	*S. ganesa*
Coll. no.:	BC-3050	C1/23/6-9-86:246	L-III-3036	holotype (NNM)	BMNH-M3008
Wear Stage	? r. M3	? r. M3	?	4 r. M1	5/7 r. M3
Measurements					
superior side					
La	546+; 560e	-	-	550+;620[1]	1200e[2]
Lb	166+; 180e	-	-	250e	-
Lc	160	-	-	220e	-
Ld	50	-	-	70e	-
Le	335+; 350e	-	320	-	-
la	425	-	-	480e	½la=382:765
lb	255	½lb=136e:270	-	½lb=165:330	½lb=243:485
lc	½lc=180e:360e	-	½lc=178e:355	½lc=172:345	½lc=336:670
ld	235	-	248	200	½ld=262:525
le	-	-	½le=125:250	205	½le=283:565
lf	-	-	½lf=121e:240e	-	½lf=300:600
lg	60	-	-	-	-
lh	195	-	½lh=110:220	½lh=98:195	½lh=205:410
posterior side					
Ha	325	-	-	380	570e
Ha'(basion-vertex)	265	-	-	-	475e
Hb	70	-	-	120e	165e
Hc	195	-	-	-	240e
lj	60	-	-	55e	½lj=70e:140e
lk	140	-	-	155	230
ll	60	-	-	½ll=33:65	75
lateral side					
Aa	185	-	-	215	425
Ab	205	-	-	225e	330
Ac	90e	100e	100e	115e	220e
Ad	365	-	-	435	790
Ae	-	-	-	-	755
Af	-	-	-	-	595
Ag	-	-	-	-	850
Ah	-	-	-	-	405
Aj	-	-	95	-	240
inferior side					
lm	½lm=137e: 275e	-	-	½lm=149:300	-
ln	½ln=186: 370	-	-	430	½ln=350:700
lo	½lo=180: 360	-	-	½lo=205e:410e	½lo=290+:580+
lp	½lp=107: 215	½lp=93e:185e	-	½lp=100:200	½lp=170:340
lq	-	-	-	½lq=235+:470+	-
lr	30e	40e	-	70	65
ls	45e	70e	-	65	95
lt	170e	150e	-	190	330
lu	40	45e	-	-	62
lv	22	14	28e	-	-
Lf	615+; 630e	-	-	610[1]	1020
Lg	160	155e	-	195e	305
Lh	220	-	-	245	365
Lj	130	-	-	-	220e
Lk	155	-	-	-	240
Ba	120	-	-	165	205e
Bb	-	-	-	-	-
Bc	90	-	-	60	110
other measurements-					
DAP tusk socket	77	-	85	-	-
DT tusk socket	87	-	95	-	-
lw (width fossa incisiva, prox.)	30	-	60	32	-
lx (width fossa incisiva, distal)	50	-	80	-	-
Ak (max. depth fossa incisiva)	-	-	72	-	-

Table 17

Lm (length fossa incisiva)	210	-	200	-	-

Table 18. Size measurements (in mm) of elephantoid vertebrae from the Beru Member, Walanae Formation (all small-sized) and from the Tanrung Formation (large-sized), South Sulawesi. For definitions of the measurements see Fig. 10.
Note: [1] indicates measurement taken on juvenile specimens: diameter of corpus excluding the epiphyses.

Size	Specimen	MeasurementsÝ Type	V1	V2	V3	V6	V8
dwarf	LR-3563-65	(thoracale, juvenile)	(38)[1]	70	54	45e	129
	LR-2706	(thoracale)	36	71	59	-	-
	LR-2591	(thoracale)	37	68	-	-	-
	1830	(thoracale, juvenile)	(36)[1]	78	75	-	-
	No. FVL-12	(thoracale)	54	86	67	-	-
	SB-3743	(cervicale VII)	30	88	-	-	-
large-sized	TA-3064	(thoracale)	68e	130	-	-	-
	TA-3065	(thoracale)	54	114	-	-	-
	TA-3066	(thoracale)	66e	116	-	-	-

Table 19. Size measurements (in mm) of the *Stegodon sondaari* sp. nov. atlas from Tangi Talo (F.BS-3.1) as compared with the atlas of *S. florensis* Hooijer, 1957 from Ola Bula, Flores (Hooijer, 1957: 125), *S. trigonocephalus trigonocephalus* Martin, 1887 from Trinil, Java (CD-3726), *S. timorensis* Sartono, 1969 from Sadilaun, Timor (Hooijer, 1969a). For definitions of the measurement see Fig. 9. Column 3 gives the measurement of F.BS-3.1 expressed as percentage of that measurement in CD-3726.

Measurements	*S. sondaari* F.BS-3.1	*S. trigonocephalus* CD-3726	% smaller	*S. timorensis* Sadilaun	*S. florensis* Ola Bula
A1	88+	168	-	113	147
A2	170e	284e	60	-	228+
A3	37	66	56	48e	67
A4	50	102	49	73e	-
A5	104	168	62	116e	165
A6	49	94	52	68	89
A7	88	170	52	116	154
A8	39e	80	49	55	69
A9	45	64	70	53e	60
A10	44	78	56	60	67
A11	13.5	31	44	-	25
RA1 = A5/A2	0.61	0.59	-	-	-
RA2 = A6/A5	0.47	0.56	-	0.59	0.54
RA3 = A9/A5	0.43	0.38	-	0.46	0.36
RA4 = A10/A9	0.98	1.22	-	1.13	1.12
RA5 = A3/A2	0.22	0.23	-	-	-
RA6 = A4/A5	0.48	0.61	-	0.63	-
RA7 = A4/A2	0.29	0.36	-	-	-

Table 20. Measurments (in mm) of several *Stegodon sondaari* sp. nov. and *S. florensis* Hooijer, 1957 vertebrae from Flores. For definitions of the measurements see Fig. 10.

	S. sondaari					*S. florensis*	
Specimen	TT4086	TT4082	TT4115	F.SB-3.2	F.SB-3..3	MM-3902	MM-4121
	thor. (IV or V)	thor. (XVI-XVIII?)	thoracale	thoracale	thoracale	thoracale	thor. (XVI-XVIII?)
V1	40	-	44	31	42	63	61
V2	51	-	50.5	54	52e	98	88
V3	51	-	47	50	45	83e	77
V4	52	54	-	56.5	52	91e	-
V5	51	38+	-	-	45	85e	-
V6	38.5	29.5	37	-	35.5	60	52
V7	26.5	28.5	23	-	-	43	36
V8	½ = ±57: 114e	½ = 34: 68	½ = 36.5: 73	-	-	½ = 77: 154	139
V9	-	25.5	-	-	-	-	-
V10	65+	63e	-	-	-	-	-

Table 21. Size measurements (in mm) of fullgrown, fossil elephantoid scapula fragments from the Beru Member, Walanae Formation (small-sized) and from the Tanrung Formation (large-sized), South Sulawesi. For definitions of the measurements see Fig. 11.

		Measurements	S1	S2	S3	S4	S5
Taxon	Specimen	Side					
dwarf	1351-52	sinistral	68	125	94	104	41.5
	C1-23/171086	sinistral	-	119	-	-	-
	Hooijer,1955b: 90	dextral	54	119e	95e	117	35
large-sized	TA-3068	sinistral	110e	160e	-	180e	76
	TA-3725	dextral	-	-	-	166e	76

Table 22. Measurements (in mm) of various dwarf elephantoid fossil humerus fragments from the Beru Member, Walanae Formation, (small-sized), and one large-sized *Stegodon* humerus fragment from the Tanrung Formation. For definitions of the measurements see Fig. 12) Based on morphological characteristics specimen LR-3707 could be attributed to *Stegodon sompoensis* Hooijer, 1964 and specimen PL-3736 to *'Elephas' celebensis* (Hooijer, 1949). juv. indicates specimen in which epiphyses have not yet been fused.

		Measurements	H1	H2	H3	H4	H5	H6	H7	H8	H9
Taxon	Coll. no.	Side									
dwarf elephantoid	LR-3707	dextral (juv.)	445e-460e	118	-	73	51	-	82	-	199
	LR-2708	dextral	-	134	108	-	-	-	-	-	-
	LR-2709	dextral	-	-	-	-	-	-	102	-	-
	LR-3706	dextral	-	-	130e	-	-	-	-	-	-
	SB-2850	dextral	-	103+	117+	-	-	-	-	-	-
	SB-2842	sinistral	-	-	105+	-	-	-	-	-	-
	2324-L1	sinistral (juv.)		-	-	-	38		-	-	-
	BC-3034	sinistral	-	-	106	-	-	-	-	-	-
	PL-3736	sinistral	-	-	-	54	84	51	-	-	187
	ABTL/161186-1	dextral (juv.)	-	123	103	-	-	-	-	-	-
	C1/23/171086	sinistral	-	134	113e	-	-	49	-	-	-
	C3/27-B	dextral	-	-	-	-	-	-	76e	47	-
	C3/28-83	sinistral	-	137	123	-	-	-	-	-	-
large-sized *Stegodon*	TA-3063	sinistral	-	230e-240e	210e	183+	91e	-	-	-	

Table 23. Measurements (in mm) of a fullgrown *Stegodon florensis* Hooijer, 1957 humerus from Ola Bula, Flores, and two humerus fragments from the same area. Measurement lettercodes are the same as in Table 22. Values of specimen CV-72 were taken from Hooijer (1972a: 23). It is not known where this specimen is kept presently.

Measurements	H1	H2	H3	H4	H5	H6	H7	H8	H9
Specimen									
fullgrown dex. humerus (Ola Bula; Hooijer, 1957a: 125)	530+	154	133	108	65	70	108	-	273e-280e
F/OB 3806 = sin. distal frag-ment (Ola Bula, surface collected)	-	-	-	-	-	-	105	69	-
C.V.72 dex. humerus (Mata Menge; Hooijer, 1972a: 23)	630	170	-	-	-	-	-	-	-

Table 24. Size measurements (in mm) of dwarf elephantoid ulna fragments from the Beru Member, Walanae Formation, South Sulawesi. Measurements of two ulna fragments, which were described earlier by Hooijer (1949, 1955b), are included in this Table. The other specimens are from the GRDC collection. For definitions of the measurements see Fig. 13. For further explanation see Table 22.

Specimen	Measurements Type	U1	U2	U3	U4	U5	U6	U7	U8
Hooijer,1949: 215 (Beru)	dextral	-	-	<63	<51	101	95	73	53
Hooijer,1955b: 91 (Sompoh)	sinistral, juv.	-	-	-	-	90	76	65	54
1306	dextral, juv.	107	49	-	-	-	-	-	-
2002	dextral	-	-	45	36	-	-	-	-
1387	sinistral	-	-	44	34	-	-	-	-
2006	dextral	-	-	-	-	55+	65	47	49
2325-L1	dextral	-	-	-	-	84	77	56	48
LR-2620	sinistral	-	-	-	-	75e	82e	51	49

Table 25. Size measurements (in mm) of dwarf elephantoid fossil femur fragments from the Beru Member, Walanae Formation, South Sulawesi. One specimen from the CVH has been described by Hooijer (1955b). Two other specimens from the CVH present in the NNM (a diaphysis fragment from Sompoh and one from Beru) have not been mentioned in earlier papers. For definitions of the measurements see Fig. 17.

Measurements		F1	F2	F3	F4	F5	F8	F9	F10	F11	F12
Specimen	Side										
Hooijer, 1955b: 91 (Celeko)	dextral	-	-	-	-	-	-	105e	90e	102	97
2323-L1	dextral	-	-	-	-	-	91	-	-	-	-
2001	sinistral	-	-	-	-	-	78	-	-	-	-
2320	dextral	-	-	-	-	-	-	121e	-	-	-
PL-3737	dextral	-	-	-	-	-	-	153	119e	144	-
C1/23/171086	sinistral	<62	-	<42	-	-	-	101	92	99e	89
D2-35/86	sinistral	-	-	-	-	-	-	130	113	-	111
CVHinNNM (Sompoh)	sinistral	71	44	-	80	44	-	-	-	-	-
CVHinNNM (Beru)	dextral	-	-	-	76	49	-	-	-	-	-

Table 26. Measurements (in mm) of the *Stegodon sondaari* sp. nov. femur diaphysis (TT-4083) and various *S. florensis* Hooijer, 1957 and *S. trigonocephalus trigonocephalus* Martin, 1887 femur specimens. Measurements are taken as indicated in Fig. 17.

Taxon	*S. sondaari*	*S. florensis*				*S. t. trigonocephalus*	
Locality/Specimen Measurements ↓	Tangi Talo TT-4083	Ola Bula (Hooijer, 1957)	? no number (isolated caput)	Ola Bula (CV-58; Hooijer, 1972a)	Mata Menge MM-4120	Trinil CD2890	Trinil CD4315
F1	57	-	-	85	90	117	115
F2	38	-	-	-	55	73.5	70
F3	33	-	-	55	45	65	63
F4	74	96	-	-	105	130	125
F5	40	72	-	-	62	81	79
F6	152	-	-	-	-	307	300
F7	243+ (460e)	-	-	-	680+	922	838
F8	-	-	105	82.5	95e	140	129
F9	-	160	-	-	-	-	192
F10	-	-	-	-	-	-	-
F11	-	130e	-	-	-	-	-
F12	-	-	-	-	-	-	-

Table 27. Size measurements (in mm) of elephantoid tibia fragments from South Sulawesi. All specimens from the Beru Member, Walanae Formation, are small-sized. One large-sized proximal tibia fragment (TA-3067) originates from the Tanrung Formation. Two specimens from the CVH in the NNM were described earlier by Hooijer (1949, 1955b). Other specimens are from the GRDC collection. For definitions of the measurements see Fig. 18.

Size	Specimen	Measurements / Side	T1	T2	T3	T4
dwarfed	Hooijer,1949: 216 (Sompoh)	sinistral	125	96e	-	-
	Hooijer,1955: 92 (Beru)	dextral, juv.	-	-	35.5	31.5
	1349	sinistral	90+	-	38e	40
	2005	dextral	94e	80e	-	-
	1345	sinsitral	-	-	40	41
	A1-2/85	sinistral	125e	100	-	-
large-sized	TA-3067	dextral	180+	155e	-	-

Table 28. Size measurements (in mm) of elephantoid fossil metapodials from South Sulawesi. Four metatarsalia from the Beru Member, Walanae Formation, are all of small size. Two metacarpalia, possibly of the same individual and which were found on a sandbank of the Tanrung River, can be attributed to *Elephas*. They are of large-size and were probably derived from younger alluvium overlying the Tanrung Formation. For definitions of the measurements see Fig. 15.

Taxon	Specimen	Measurements Type	Me1	Me3	Me4	Me5	Me6	Me7	Me8	Me9
Dwarf	LR-3552	Mtrs. III, dextral (juv.)	66	32.5	36e	31.5	23	41	33	23
elephantoid	1520	Mtrs. IV, sinistral	64	37	33	32	17	38	24	20
	1397	Mtrs. I, sinistral	-	-	-	-	-	-	-	-
	1369	Mtrs. IV, dextral (juv.)	-	29	22+	25	12	-	-	-
Elephas	TA-3061	Mcrp. III, dextral	196	72	83e	63	44	91	74	44
(large-sized)	TA-3062	Mcrp.V, dextral	145	85	78	58.5	54	81	73	33

Table 29. Size measurements (in mm) and size ratios of specimens GRDC TA-3061 (metacarpale III) and GRDC TA-3062 (metacarpale V) from South Sulawesi, and of the metacarpalia III (A) and metacarpalia V (B) of various elephantoids (fossil and recent) for comparison. Measurements of *S. zdanskyi* Hopwood, 1935 are taken from Zheng et al. (1975). For definitions of the measurements see Fig. 15. The origin of the various specimens included in this table are given in Fig. 60.

A: Metacarpale III						
Taxon	*M. meridionalis*	*M. primigenius*	*A. arvernensis*	*E. maximus*	*Elephas* sp.	*S. zdanskyi*
Specimen	RGM 145585	Mol 2015	RGM 119327	VFUU	TA-3061	Zheng et al.,1975
Measurements ↓	dextral	dextral	dextral	sininstral	dextral	?
Me1	243	185	139	189	196	240
Me3	87	65	60	67	72	107
Me4	110+ (damaged)	95e	80	89	83e	141
Me5	85	57	51	58.5	63	-
Me6	70	48	40	41.5	43.5	-
Me7	106	72	72	78	91	133
Me8	105	76	63	69	74.5	108
Me9	58	44	52	40	44.5	-
Me1/Me3	2.79	2.85	2.32	2.82	2.72	2.24
Me1/Me4	-	1.95e	1.74	2.12	2.36e	1.70
Me1/Me5	2.86	3.25	2.73	3.23	3.11	-
Me1/Me6	3.47	3.85	3.48	4.55	4.51	-
Me1/Me7	2.29	2.57	1.93	2.42	2.15	1.80
Me1/Me8	2.31	2.43	2.21	2.73	2.63	2.22
Me1/Me9	4.19	4.20	2.67	4.73	4.40	-
Me6/Me8	0.67	0.63	0.63	0.60	0.58	-
Me7/Me8	1.01	0.95	1.14	1.13	1.22	1.23
Me8/Me9	1.81	1.73	1.21	1.73	1.67	1.54

B: Metacarpale V								
Taxon	*M. meridionalis*			*M. primigenius*	*A. arvernensis*	*E. maximus*	*Elephas* sp.	*S.zdanskyi*
Specimen	RGM 119044	RGM 118676	Mol 2020	Mol 2022	RGM 118902	VFUU	TA-3062	Zheng'75
Measurements ↓	Mc.V s.	Mc.V d.	Mc.V s.	Mc.V s.	Mc.V s.	Mc.V s.	Mc.V d.	Mc.V
Me1	201	182	189	185	129	125	145	202
Me2	156	153	150	146	102	121	128	-
Me3	94	88	96e	94	75	67	85	130
Me4	113	102	114	111	85	75	78	121
Me5	84	65	91	66	65	48	58.5	-
Me6	104	81	109	108	70	48	54	-
Me7	97	84	101	85	71	65.5	81	121
Me8	115	95	111	119	83	66	73	113
Me9	53	56	72	85	43	38	33	-
Me1/Me3	2.14	2.07	1.97e	1.97	1.72	1.87	1.71	1.55
Me1/Me4	1.78	1.78	1.66	1.67	1.52	1.67	1.86	1.67
Me1/Me5	2.39	2.80	2.08	2.80	1.98	2.60	2.48	-
Me1/Me6	1.93	2.25	1.73	1.71	1.84	2.60	2.69	-
Me1/Me7	2.07	2.17	1.87	2.18	1.82	1.91	1.56	1.67
Me1/Me8	1.75	1.92	1.70	1.55	1.55	1.89	1.99	1.79
Me1/Me9	3.79	3.25	2.62	2.18	3.00	3.29	4.39	-
Me6/Me8	0.90	0.85	0.98	0.91	0.84	0.73	0.74	-
Me7/Me8	0.84	0.88	0.91	0.71	0.86	0.99	1.27	1.07
Me8/Me9	2.17	1.70	1.54	1.40	1.93	1.74	2.21	-

Table 30. Summary measurements of *'Elephas' celebensis* (Hooijer, 1949) molars from the Beru Member, Walanae Formation, South Sulawesi, Indonesia. N = number of ridges; L = maximum length; W = maximum width; H = maximum heigth; LF = lamellar frequency at the level of valley bottoms; ET = enamel thickness; h/w = heigth x 100/width indices of individual lamellae; L/W = ratio maximum length/maximum width; EA = enamel amplitude; EF = enamel frequency; Dig. = number of digitations per lamellae. For further explanation of measurement procedures see Methods and Measurements. n = number of measurements; SD = standard deviation; CV = coefficient of variation. All CV values are adjusted by multiplying with Haldane's (1955) correction factor (1+1/(4n)), to correct for bias introduced by small samples (Roth, 1992). For further explanation see chapter 1.

dP2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x2x	21.8	19.0	-	-	1.15	1.5	-	-	-	-
	n	1	1	1	0	0	1					
dP3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	-3x	-	25.3	-	17.9	-	0.7-1.1	-	-	-	-
	n	0	0	1	0	1	0					
inf.	Range	(x)6(x)	32	20.5	-	17.8	1.57	0.9	-	-	-	-
	n	1	1	1	0	1	1					
dP4		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x6x/x7x	53-54	26-30	-	12.8-14.4	1.91-2.12	1.2-1.4	-	2/34	12/24	6/7
	n	3	3	4	0	3	3					
	Mean	6.7	53.3	27.4		13.9	2.04					
	SD	0.47	0.47	1.64		0.75	0.09					
	CV	7.66	0.96	6.36		5.89	4.84					
inf.	Range	x3½-/-3-	-	22.0-24.6	-	12.3-13.0	-	1.4-1.5	-	12	24	-
	n	0	0	2	0	2	0					
	Mean			23.3		12.65						
P3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x3x	18.8-20.3	13.9-15e	10.1-16.7	18.8-19.7	1.32-1.43	0.6-1.5	68-102	-	-	4
	n	3	3	3	2	2	3					
	Mean	3.0	19.7	14.4	13.4	19.3	1.37					
	SD		0.63	0.47			0.05					
	CV		3.49	3.53			3.68					
inf.	Range	x3x	18.8-20.8	12.7-15.2	-	20.8	1.37-1.48	1.1-1.6	-	-	-	24
	n	2	2	2	0	1	2					
	Mean	3.0	19.8	13.95			1.425					
P4		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x3x	28	23.9	-	13.3	1.17	1.6-2.0	-	-	-	-
	n	1	1	1	0	1	1					
inf.	Range	x3x	28.5-31	19e-20.3	21	15.2	1.40-1.63e	1.6-2.0	111	-	-	34
	n	2	2	2	1	1	2					
	Mean	3.0	29.8	19.7			1.52					

Table 30

M1		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x6-	-	33	40	10.9	-	1.4-2.0	118	-	-	45
	n	0	0	1	1	1	0					
inf.	Range	x8/x8x	80-94e	29-35	32e-39	9.7-11.5	2.66e-3.13e	1.7-2.8	106-132	1	01/13	45/57
	n	3	3	5	2	6	3					
	Mean	8	86.3	31	35.5	10.7	2.84					
	SD		5.8	2.1		0.64	0.21					
	CV		7.27	7.1		6.23	7.82					
M2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x7x/x8/x8x	114-136e	42-58	45	6.4-8.2	2.34e-2.65	2.0-3.4	107-113	1	02/03	5/6
	n	2	2	3	1	4	2					
	Mean	7.8	125.0	47.7		7.4	2.50					
	SD			7.32		0.65						
	CV			16.63		9.36						
inf.	Range	(x½)½8x	115e	38-41	42e	8.6-9.0	3.03e	2.2-2.9	102	1	02	4/56
	n	1		2	1	2	1					
	Mean			39.5		8.8						
M3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x10x/x11x	160-187	42-56	50e	5.7-7.5	3.27-3.34	2.2-3.7	106-117	1	02	4/6/46
	n	2	2	6	1	5	2					
	Mean	10.5	173.5	49.7		6.3	3.31					
	SD			4.64		0.62						
	CV			9.73		10.19						
inf.	Range	x11x	166	42-53e	46e-51	5.8-8.0	3.93	2.6-3.5	97-115	1	01/02	4/45
	n	1	1	8	4	8	1					
	Mean			45.6	48.0	7.3						
	SD			3.97	1.87	0.73						
	CV			8.99	4.13	10.36						

Table 31. Summary biometrics of *Stegodon t. trigonocephalus* Martin, 1887 molars from Java. For explanation of the measurements see Table 30.
A: Based on molars exclusively originating from the locality Trinil, Central Java (largely based on own measurements taken on material in the NNM, but including some measurements taken on material collected during the Selenka Expedition as presented by Janensch (1911).
B: Based on molars exclusively originating from the locality Kedung Brubus, East Java (own measurements only).

A. Trinil

dP3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x6/6x	53-58	39-44	18	10.5-10.7	1.32-1.43	1.2-1.7	44-58	12	67	6-12/89
	n	4	4	5	2	3	4					
	Mean	6.0	55.43	40.90	18.10	10.60	1.36					
	SD		1.92	1.74		0.08	0.04					
	CV		3.68	4.47		0.83	3.51					
inf.	Range	6x/x6x	62-66	35-40	18-22	9.9-11.6	1.61-1.78	1.1-2.1	51-69	12/13	56/78	89/8-12/9-11/11
	n	4	3	4	3	4	3					
	Mean	6.0	64.4	37.7	20.3	10.5	1.67					
	SD		1.56	2.00	1.57	0.69	0.08					
	CV		2.63	5.65	8.39	7.04	5.21					

dP4		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x8/x7x	90-110	48-56	28-30	7.8-8.5	1.79-1.96	1.7-3.5	50-52e	1/12/13/23	34/35/45/46	11-12/12-15/ 15-15
	n	6	6	6	5	4	6					
	Mean	7.2	100.5	53.5	29.0	8.1	1.88					
	SD	0.37	6.08	2.63	0.58	0.25	0.05					
	CV	5.42	6.30	5.11	2.11	3.25	2.92					
inf.	Range	x8x	111-122	42.5-54	26-29.5	7.3-8.5	2.17-2.41	1.5-2.9	53-69	12/23	35/36/46/57	8-10/8-11
	n	5	4	7	2	7	4					
	Mean	8.0	115	49.9	27.8	8.1	2.30					
	SD	0	4.30	4.11		0.37	0.09					
	CV		3.97	8.54		4.76	4.10					

M1		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x7x	127-135	59-66	41.5	6.3	1.89-2.15	2.8	56-64	-	-	68
	n	3	2	3	1	1	3					
	Mean	7.0	131.2	63.3	41.5	6.3	2.04					
	SD			3.09			0.11					
	CV			5.29			5.83					
inf.	Range	x8x/x9x	157-165	58.3-66	39-47	6.0-7.0	2.39-2.68	2.2-3.4	61-72	12	46	46/67/9-11/ 10-12
	n	3	2	4	3	5	2					
	Mean	8.3	161	61.6	42.8	6.6	2.54					
	SD	0.47		2.61	3.33	0.34						
	CV	6.13		4.50	8.42	5.41						

M2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x9x	191-219	78-94	48-56	4.0-4.8	2.45-2.48	3.9-4.3	65	12	25	7
	n	2	2	4	2	3	2					
	Mean	9.0	205	86.2	52	4.5	2.47					
	SD			5.81		0.38						
	CV			7.16		9.01						

Table 31

inf.	Range	x10x	210	69-81	50	4.0-5.7	2.63	2.7-4.1	63e	12	24/24	-	
	n	1	1	4	1	4	1						
	Mean	10.0	210	77.1	50	5.0	2.63						
	SD			4.72		0.69							
	CV			6.51		14.75							

M3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x11x	272-281	80-101	39e	4.0-5.0	2.78-2.90	4.0-5.6	50e	12	23	79/10-12
	n	2	2	7	1	4	2					
	Mean	11.0	276.5	89.4	39	4.5	2.84					
	SD			6.31		0.35						
	CV			7.31		8.35						
inf.	Range	x13/x13x	253-266e	71e-98	48e-58	4.0-5.0	3.24e-3.56	3.6-4.9	68e-70e	1	34	68/7-10
	n	2	2	6	2	4	2					
	Mean	13.0	259.5	83	53	4.5	3.40					
	SD			8.05		0.41						
	CV			10.12		9.74						

B. Kedung Brubus

dP3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
inf.	Range	7	66-69	42	-	9.5	1.55-1.63	1.3-1.9	42+	24	35	10
	n	2	2	2		1	2					
	Mean	7.0	67.5	42.4			1.59					

M1		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x7x	125	66	36	6.2	1.89	2.8-3.0	53-56	-	-	6-10
	n	1	1	1	1	1	1					

M2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	-	-	82	-	4.5	-	4.0-4.6	-	-	-	-
	n			1		2						
	Mean					4.5						
inf.	Range	x9x	213	76c-85	43-46.5	3.7-5.0	2.80	3.5-5.1	56-62	-	-	79/10
	n	1	1	3	2	3	1					
	Mean			80.5	44.8	4.4						
	SD			4.50		0.54						
	CV			6.06		13.18						

Table 32. Summary biometrics of *Stegodon orientalis* Owen molars from the limestone fissures at Yanjinggou, Sichuan, China. Most measurements are from data presented by Colbert & Hooijer (1953: table 29), measurements of one M^1 were taken from Hopwood (1935), and some own measurements were taken on material in the BMNH. For explanation of the measurements see Table 30.

dP3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	5/6/x6	44-68	33-43	16-23	9.3	1.33-1.70	1.9-2.4	44-55	12	67	-
	n	12	12	12	6	1	12					
	Mean	5.3	58.8	38.8	19.8		1.51					
	SD	0.43	6.27	2.72	2.61		0.11					
	CV	8.42	10.90	7.16	13.70		7.64					
inf.	Range	5/6	50-72e	32-43	17-28	-	1.42-1.88	-	52-67	-	-	-
	n	12	13	13	9	0	13					
	Mean	5.7	62.1	37.9	22.4		1.64					
	SD	0.47	5.88	3.29	3.17		0.11					
	CV	8.49	9.65	8.85	14.50		6.59					
dP4		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	6/-6x/7	97-125	53-66	26-35	-	1.80-1.92	-	47-58	-	-	-
	n	6	6	6	5	0	6					
	Mean	6.7	112.5	60.3	29.6		1.86					
	SD	0.47	9.43	4.11	3.01		0.05					
	CV	7.37	8.73	7.10	10.67		2.53					
inf.	Range	7/x7x	113-130	43-62	28-33	5.8-6.5	2.02-2.19	1.9-3.0	53-69	1/12	35/36	11+/13-17
	n	5	5	8	6	3	5					
	Mean	7.0	122.2	56.1	31.3	6.1	2.11					
	SD	0.00	6.24	5.23	1.70	0.31	0.07					
	CV		5.36	9.61	5.65	5.52	3.29					
M1		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x6x/x7x	146-151	67e-69	39e	5.5-5.7	2.13-2.19	2.1-4.0	60e	1	24/46	9-10
	n	2	2	3	2	2	2					
	Mean	6.5	148.5	68.2	41	5.6	2.16					
				0.85								
				1.34								
inf.	Range	x7x/x8x	154-185	65-84	38e-49	4.5-5.4	2.08-2.35	3.0-4.6	53-72	1	25/35	9/9-11/12
	n	6	5	6	6	3	5					
	Mean	7.5	169.2	73.5	42.0	4.9	2.26					
	SD	0.50	10.81	7.63	3.41	0.39	0.10					
	CV	6.94	6.71	10.82	8.47	8.59	4.59					
M2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x6x/8	169-185	88-89	44-45	4.1	1.90-2.10	4.3	51	-	-	10
	n	3	3	3	3	1	3					
	Mean	7.0	178.7	88.7	44.7		2.01					
	SD	0.82	6.94	0.47	0.47		0.08					
	CV	12.64	4.21	0.58	1.14		4.51					
inf.	Range	-6x/x7/9	197-220	68-95	47-53	3.7	2.32-3.09	4.0-4.7	51-65	-	-	8-11/11-13
	n	4	3	3	4	1	3					
	Mean	8.3	209.0	79.0	49.6		2.69					
	SD	0.83	9.42	11.58	2.33		0.32					
	CV	10.68	4.88	15.87	4.99		12.69					
M3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x11x/12	286	105-108	54-55	-	-	-	-	-	-	-
	N	2	1	2	2	0	0					
	Mean	11.5		106.5	54.5							
inf.	Range	x12x	360	90	45e-55e	-	-	-	-	-	-	-
	N	1	1	1	2	0	0					
	Mean				50.01							

Table 33. Summary biometrics of *Stegodon sompoensis* Hooijer, 1964 molars from the Beru Member, Walanae Formation, South Sulawesi. The material includes specimens collected during our 1990, 1991 and 1992 surveys and material described by Hooijer. Note: values indicated by "[1]" are referring to the fragmentary holotype specimen (Hooijer, 1964a: pl. I, figs.1, 2), which was determined originally as either a dP^4 or M^1, but which is here determined as a dP^3. For explanation of the measurements see Table 30.

dP3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	(1/2?)4x[1]/(1/2?)3x	39+[1]	28e[1]-29	-	11.8-14.6[1]	-	1.1-1.6	-	1/12[1]	25[1]/35	7
	n	0	0	2	0	2	0					
	Mean	-	-	28.5	-	13.2	-					
dP4		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x7x/x6xx	79	41	27	8.6	1.91	1.5-2.4	61-70	13	45	8/10
	n	1	1	1	1	1	1					
inf.	Range	-½3x	-	40	-	8.5	-	2.3-2.5	-	1	46	-
	n	0	0	1	0	1	0					
M2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	(x1½)½6	115e	48-54	38e	7.8	-	2.2-2.9	59e-72	12	12	79
	n	1	1	2	1	1	0					
	Mean	-	-	51	-	-	-					
inf.	Range	(x1)7x	-	46-57	-	7.3e-7.7	2.18+	2.9-4.2	58+	1	23/45	5/67
	n	1	0	2	0	2	0					
	Mean	-	-	51.5	-	7.5	-					

M3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	(5)3x/(x)9x	125e-140e	61-65e	-	6.6-7.7e	2.30e	3.4-4.6	-	12	24/35	8
	n	1	2	2	0	4	1					
	Mean	-	132.5	63	-	6.9	-					
	SD	-	-	-	-	0.46	-					
	CV	-	-	-	-	7.15	-					
inf.	Range	(x1)7½-/(x½)½8x/x10x	140e-175e	45-62	38-42	5.8-7.2	2.82e-3.11e	2.5-4.3	78-85	1/2/23	12/13/24/35	46/47/6/78/79
	n	2	2	5	3	5	2					
	Mean	9.5	157.5	54	39.3	6.5	2.97					
	SD	-	-	6.6	1.88	0.46	-					
	CV	-	-	12.84	5.19	7.53	-					

Table 34. Biometrics of individual molars here attributed to *Stegodon* sp. B. The molars originate from the Tanrung Formation, South Sulawesi (prefix TA) and from the Pintareng Formation, Sangihe Island (prefix PS). Specimens TA-3711 and TA-3712 belonged to a singual individual, as did specimens PS1/1 and PS1/2. In the lower columns the width/heights (heights of unworn ridges only) of successive ridges are given for each molar (fragment). If the anterior portion of a molar was not preserved, the ridge numbers listed in the left column, which are associated with the measurements in the lower columns represent the estimated ridge numbers, counting from anterior in posterior direction. Measurements taken on anterior and posterior halfridges are indicated with x. For further explanation of the measurements see Figs. 4-6, chapter 1.

GRDC no.	TA-3712	TA-3711	TA-3723	PS1/1	PS1/2
Element	dex. DP^4	sin. M^1	sin. M_3	dex.M^1	dex. M
N	-½5x	x8	-⅓3x	-½5-	x6-
L	-	155	-	-	-
W	65.3	68.5c	75e-80e	69.9	71.9
H	-	48.5	-	-	46.8
LF	6.2	5.8	-	5.4	4.9
ET	2.2-3.1	3.0-3.6	4.0-5.0	2.8-3.2	3.1-3.6
h/w	-	63e-71	-	-	62-65
H/W	-	0.71	-	-	-
L/W	-	2.26	-	-	-
EA	12	12	-	12	-
EF	25	24	-	45	-
Dig.	-	9	-	-	79
width\heigth of individual ridges ridge no.					
anterior x		32 \ 23e			44 \ -
1		59 \ -			62.3 \ -
2		62c \ 39e			69.8 \ 44
3	60.0c \ -	64.5c \ 41.5			69.8 \ 43
4	62.2c \ -	68c \ 46		68.8 \ -	71.9 \ 47
5	65.0c \ -	68.5c \ 47		69.5 \ -	71.5 \ 46
6	65.3c \ -	68c \ 48.5		69.9 \ -	70.4 \ 45
7	61.9c \ -	67.5c \ 46c	74+ \ -	67.4 \ -	
8	49e \ - (post. x)	62c \ 41.5	68e \ 39.5	43.6 \ - (post. x)	
9			63e \ -		
10			56e \ -		
			32e \ - (post. x)		

Table 35. Summary biometrics of dental elements of *Stegodon sondaari* sp. nov. from the base of the Ola Bula Formation at the locality Tangi Talo, Ngada District, West Central Flores. Note: measurements indicated with [1] are taken on the M_3 in the type mandible. This molar is still in the alveole and not yet fully developed, the posterior lamellae not yet being fused. For explanation of the measurements see Table 30.

dP3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
inf.	Range	(1½)½4x/6	28e-32e	15.7-18.0	-	17.8	2.04e	0.8-1.0	-	-	-	-
	n	2	2	2	0	1	1					
	Mean	6	30	16.9	-	-	-					

dP4		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x7/7x/x6x	52e-64	28-30	20.6-26	12.6-13.5	1.88e-2.11	1.8-2.5	59-90	1/12	45	56/67/10
	n	4	4	4	3	4	4					
	Mean	6.5	59.3	29.3	22.7	13.0	2.03					
	SD	-	4.54	0.83	2.35	0.38	0.09					
	CV	-	8.15	3.01	11.18	3.10	4.65					
inf.	Range	-5x	44+	25.7	-	13.9	-	1.7	-	1	3	-
	n	0	0	1	0	1	0					

M1		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	-½5x/x6x	75+ - 85	40-46	27	7.8-8.3	2.10	3.0-3.3	61-71	1	56	-
	n	1	1	3	1	3	1					
	Mean	-	-	44	-	8.0	-					
	SD	-	-	2.83	-	0.24	-					
	CV	-	-	6.96	-	3.21	-					
inf.	Range	-½5x/-7	68+ (75e)	39-40	33	8.8-9.2	1.88e	3.4-3.7	85-92	1	46	7
	n	0	1	2	1	2	1					
	Mean	-	-	39.5	-	9.0	-					

M2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x6x/x7/x7x	92e-105	42-47	31-37	7.6-8.8	2.11-2.27	2.9-3.8	67-85	1	14/35	78/8/89/9-10
	n	4	4	5	4	5	4					
	Mean	6.8	98.8	44.4	33.8	8.1	2.19					
	SD	0.25	5.80	1.85	2.17	0.41	0.06					
	CV	3.94	6.24	4.39	6.82	5.31	3.07					
inf.	Range	-7x/x8/x8x	98-104	36.5-42	28-34	8.6-9.4	2.40-2.85	2.9-3.7	73-89	1	24/25	5/67/7/89
	n	4	3	5	4	5	3					
	Mean	7.9	102.0	39.6	31.5	9.1	2.59					
	SD	0.22	2.83	2.24	2.18	0.28	0.19					
	CV	2.92	3.00	5.95	7.35	3.25	7.90					

M3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.

Table 35

sup.	Range	-½5x	83+	44e	-	6.8	-	3.7-4.3	-	1	5	-
	n	0	0	1	0	1	0					
inf	Range	x8[1]	85+[1]	41e[1]	31e[1]	<9.8[1]	-	-	70-87	-	-	7
	n	1	0	1	1	0	0					

Table 36. Summary biometrics of material from Timor attributed *Stegodon timorensis* Sartono, 1969. For explanation of the codes used see chapter on methods (measurements after Hooijer, 1969a, 1972a; Sartono & Marino, 1978, and partly based on own measurements). The material includes specimens from the localities Weaiwe, Mota Oe and Fatubesi in the Atamboa Regency of West Timor. The type specimen, a molar fragment with -5x ridges preserved, was originally determined by Sartono (1969) as an M^3 sin., but might instead represent a lower M_3, as was already pointed out by Hooijer (1969a). The type specimen and other fragmentary material of uncertain rank described by Hooijer (1969a, 1972a), are not included in the summary measurements.

M2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x7x	110	45-46e	-	8	2.44	-	83	-	-	-
	n	1	1	2	0	2	1					
	Mean	-	-	45.5	-	8	-					
inf.	Range	(3)6x / x8(1x)	114e-116e	40-43	-	10	2.70e-2.78e	2.2-2.9	87	12	56	7
	n	2	2	3	0	2	2					
	Mean	9	115	41.3	-	10	2.74					
	SD	-	-	1.25	-	-	-					
	CV	-	-	3.27	-	-	-					
M3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	-5x	-	49-52e	41e-49e	7.5e	-	-	79-98	-	-	79
	n	0	0	2	2	1	0					
	Mean	-	-	50.5	45	-	-					
inf.	Range	x8-/-½9x/ x10x	118-128	42-47	35-38e	8-9.5	2.62-3.05	2.4-2.8	70-88	12	57	57/79
	n	2	2	4	4	4	2					
	Mean	10	123	45.3	36.5	8.9	2.84					
	SD	-	-	2.05	1.12	0.55	-					
	CV	-	-	4.80	3.26	6.59	-					

Table 37. Summary biometrics of *Stegodon florensis* Hooijer, 1957 molars from Member B of the Ola Bula Formation, Soa Basin, West Central Flores, Indonesia. The values are largely based on own measurements taken on material present in the NNM and GRDC collections. Notes: $ indicates measurements taken on the holotype mandible. *: indicates LF values given by Hooijer (1972a), but it is not clear how the measurement was obtained: lingually, buccally, occlusally or average? For definitions of the measurements and lettercodes see chapter 1 and Figs. 4-6.

dP3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
inf.	Range	3-	-	-	-	12.5e	-	1.0-1.1	-	23	7	-
	N	0	0	0	0	1	0					
dP4		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
inf.	Range	-7x	-	41-44	33e	8.4e	-	-	-	-	-	-
	N	0	0	2	1	1	0					
	Mean	-	-	42.5	-	-	-					
M1		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x7x	126	54-60c	36e-41c	6.5-6.9-7*	2.21	3.5	64-69	-	-	9-10
	n	1	1	3	2	3	1					
	Mean	-	-	57.0	38.5	6.8	-					
	SD	-	-	2.45	-	0.22	-					
	CV	-	-	4.66	-	3.44	-					
inf.	Range	x9x	134	48e-55e	37-46c	6.0-7.5*	2.79e	3.2-3.3	69-88	1	23	78/9
	n	1	1	3	3	3	1					
	Mean	-	-	52.7	41.0	6.6	-					
	SD	-	-	3.30	3.74	0.66	-					
	CV	-	-	6.78	9.89	10.97	-					
M2		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	-	-	68	50e	5.0*	-	-	73	-	-	-
	n	0	0	1	1	1	0					
inf.	Range	x10x	187e	60	44	5.1-5.9	3.10e	3.0	71-75	-	-	89
	n	1	1	1	1	2	1					
	Mean	-	-	-	-	5.5	-					
M3		P	L	W	H	LF	L/W	ET	h/w	EA	EF	Dig.
sup.	Range	x12x	240-270	78-87	54e-62	3.9-5.0*	2.93-3.18	3.2-5.3	60-81	12/13	24/34/35	7/9-10/10
	n	2	2	7	3	8	2					
	Mean	12.0	255.0	82.6	58.0	4.6	3.06					
	SD	-	-	3.37	3.26	0.33	-					
	CV	-	-	4.23	6.09	7.37	-					
inf.	Range	x12-/x14x	280e$-300	68-72$-78	50$-56e	4.7$-5.5	3.85-3.89e$	3.8-4.5	68-82	12$	25$	7$/8-10
	N	1	2	4	4	4	2					
	Mean	-	290.0	73.5	52.8	5.1	3.87					

Table 37

	SD	-	-	3.84	2.78	0.29	-
	CV	-	-	5.55	5.59	6.04	-