List of figures

Figure 2.1: Dinner at Campagaloe, near Batu Ejayya in 1969. 13
Figure 3.1: Sites mentioned in text. 19
Figure 3.2: Location of pollen sites mentioned in text for Sulawesi. 20
Figure 3.3: Lake Tondano pollen record. 21
Figure 3.4: Wanda mire pollen record. 21
Figure 3.5: Geochemical and pollen data for Lake Towuti (TOW-10-9). Ti counts – proxy for terrestrial erosion. δ13Cwax – proxy for C3/C4 vegetation. 23
Figure 4.1: Early painting of a possible babirusa similar to one dated to over 35,000 years ago. 32
Figure 4.2: Mubarak Andi Pampang and Maxime Aubert sampling for rock art dating. 34
Figure 4.3: Intermediate red painting of a human figure from Leang Jing. 35
Figure 4.4: Charcoal human figure from Sampeang 1, Maros region, Sulawesi. 36
Figure 4.5: Charcoal human figure from Gua Sireh, Sarawak, Malaysia. 36
Figure 4.6: Rock painting of a badi’ (a type of iron dagger from Southwest Sulawesi) at the Malarrak site, Wellington Range, northwest Arnhem Land. 37
Figure 4.7: Graffiti is a growing threat to Maros rock art sites and to rock art globally. 38
Figure 4.8: There appears to have been an increase in flaking of limestone surfaces since the 1980s, damaging paintings, stencils and drawings in the process. 38
Figure 5.1: Leang Timpuseng cave art, Maros, Sulawesi. 44
Figure 5.2: Historical drawing of the male babirusa skull. 45
Figure 5.3: Historical illustration of a male hairy/golden babirusa. 45
Figure 5.4: Historical illustration of a male Sulawesi babirusa. 45
Figure 5.5: Landmarks used in the geometric morphometric analyses. 48
Figure 5.6: Leang Timpuseng cave art compared to photographs. 50
Figure 5.7: Changes to babirusa illustrations over time. 51
Figure 5.8: Sexual dimorphism in illustrations and photographs. 52
Figure 5.9: Babirusa illustrations compared to photographs. 53
Figure 6.1: The distribution of painted rock art in Indonesia and Timor Leste. 63
Figure 6.2: Rock art sites in the study area. 64
Figure 6.3: Pair of negative hand stencils at Gua Pominsa. 66
Figure 6.4: Human figures bearing weapons including three on a boat at Gua Pominsa. 66
Figure 6.5: Human figures bearing weapons including one riding horseback at Gua Pominsa. 66
Figure 6.6: Human figure with digits outstretched at Gua Pominsa.

Figure 6.7: Human figure with calcite coating at Gua Pominsa.

Figure 6.8: Mosaic of Gua Metanduno rock art.

Figure 6.9: Male zoomorph within Gua Metanduno interior panel.

Figure 6.10: Detail of human figure standing on ‘boat’, superimposed by back legs of male zoomorph, Gua Metanduno cave.

Figure 6.11: Gua Metanduno panel.

Figure 6.12: Three-fingered hand stencil at right wall, Gua Kabori.

Figure 6.13: Ceruk Lakan Taghu (top) and some of its rock paintings (below).

Figure 6.14: Examples of prau motifs from sites in the Muna karsts.

Figure 7.1: Gua Pondoa main panel.

Figure 7.2: Motifs of boat with passengers (lower left), sun symbol (upper left) and two anthropomorphs (right).

Figure 7.3: Motifs of boat with schematised human figures (upper centre), quadrupeds (top and bottom centre) and geometric grid pattern (lower centre).

Figure 7.4: Motif of anthropomorph with frond-like headdress.

Figure 7.5: Two anthropomorphs with headdresses.

Figure 7.6: Possible anthropomorphs associated with geometric motifs.

Figure 7.7: Linear frond-shaped motif.

Figure 7.8: Curvilinear geometric motif.

Figure 7.9: Linear motifs (left and centre), cross-hatched motif (left) and anthropomorph on schematised boat (right).

Figure 7.10: Indeterminate geometric motifs (left), stylised anthropomorph with headdress (centre) and abstract curvilinear motifs (right).

Figure 7.11: ‘Sun symbol’ motif positioned beneath the main panel.

Figure 7.12: Curvilinear kite-shaped motif.

Figure 8.1: Sites in Sulawesi that have yielded accepted radiometric determinations.

Figure 8.2: Mallawa radiocarbon dates’ 95.4% probability distributions and related calibration curves related to the probability of site occupancy by 500-year cal BP intervals.

Figure 8.3: Sulawesi sites summed probabilities by site aspect.

Figure 8.4: Sulawesi sites summed probabilities by site usage.

Figure 8.5: Sulawesi sites summed probabilities by dating material.

Figure 9.1: Map showing location of excavated sites in Walandawe area, and inset showing location of Lake Towuti and Maros region.

Figure 9.2: View of landscape on edge of the Sungai Wiwirano river flats.

Figure 9.3: Plan of Gua Mo’o hono showing location of test pit and area of deep cavern.
Figure 9.4: Gua Mo’o hono viewed from the northwest showing the location of the test pit and team member.

Figure 9.5: South section of Mo’o hono showing shell lenses, bioturbation features and location of dating samples.

Figure 9.6: Photo of south section of Gua Mo’o hono showing ash lenses and burnt earth features.

Figure 9.7: Weight of excavated deposit in Gua Mo’o hono by spit.

Figure 9.8: Gua Mo’o hono decorated pottery and rims (A–J) and polished stone tip (K).

Figure 9.9: Gua Mo’o hono decorated pottery.

Figure 9.10: Gua Mo’o hono stone box rim fragment, internal view Spit 6.

Figure 9.11: Number of cores, flakes and broken flakes in Gua Mo’o hono by spit.

Figure 9.12: Selection of retouched artefacts from Gua Mo’o hono.

Figure 9.13: Selection of cores from Gua Mo’o hono.

Figure 9.14: Gua Mo’o hono mandible fragment with Spit 19 first left lower molar fitted into place.

Figure 9.15: Gua Mo’o hono freshwater shell (weight shown by spit).

Figure 9.16: Gua Mo’o hono vertebrate fauna (weight shown by spit).

Figure 9.17: A – Babirusa (Babyrousa celebensis) right maxillary M3 from Spit 21; B – Fragment of Suidae right maxilla with broken M2 and heavily worn M3 from Spit 18.

Figure 9.18: A – The labial (above) and occlusal (below) aspects of the left mandibular dp4 provisionally recorded as the Javan deer (Rusa timorensis) and subsequently reallocated to Anoa (Bubalus depressicornis). B – Strigocuscus celebensis left mandibular body from Spit 17. C – (below) The left mandibular canine from Spit 13 originally attributed to a dog and subsequently reallocated to the Sulawesi brown civet cat (Macrogalidia muschenbroekii). D – Fragment of giant Sulawesi rat (Paruromys dominator) right mandible with M1 and M2 from Spit 19.

Figure 9.19: A – Attenuate bone unipoint from Gua Mo’o hono Spit 7 made on cortical bone showing longitudinal striations from scraping during manufacture and small parallel transverse striations near the midpoint, which may be from hafting wear. B – Bone point probably made on suid incisor from Spit 24. C – Incidentally calcined bone point made on cortex bone from Gua Mo’o hono Spit 25. D – Bone point made on babirusa mandibular incisor from Gua Mo’o hono Spit 28.

Figure 9.20: Tusks tool from Gua Mo’o hono Spit 11.

Figure B9.1: Stratigraphic plot of geoarchaeological data from Gua Mo’o hono.

Figure 10.1: Gua Sambangoala site plan.

Figure 10.2: Gua Sambangoala site, test pit and approach path.

Figure 10.3: Gua Sambangoala stratigraphy and calibrated AMS dates.

Figure 10.4: Percentages of the NISP identification at Gua Sambangoala.

Figure 11.1: Sites and topographic features mentioned in the text.
Figure 11.2: Mandatte open site located to the east of Mount Bambapuang. 174
Figure 11.3: Entrances to Buntu Banua cave. 175
Figure 11.4: Topographic map with location of Buttu Batu Rockshelter. 176
Figure 11.5: Photograph of Buttu Batu Rockshelter at Enrekang (left); A map of the excavated squares (right). 177
Figure 11.6: Stratigraphic map of U1-T1, U1-T2 and U1-T3 squares. 177
Figure 11.7: Bar graph showing the weights of the excavated pottery sherds by spit from Buttu Batu squares U1-T1, U1-T2 (blue) and U1-T3 (red). 179
Figure 11.8: Bar graph showing the weights of flaked stone artefacts, osseous remains and shellfish in U1-T1 and U1-T2, Buttu Batu. 180
Figure 11.9: Bar graph showing the weights of flaked stone, osseous remains and shellfish in U1-T3, Buttu Batu. 181
Figure 11.10: Varieties of simple and combination motifs on the pottery from Buttu Batu. 182
Figure 11.11: Simple Buttu Batu motifs 1 (left) and 4 (right). 182
Figure 11.12: Simple Buttu Batu motif 2 (left) and combination Buttu Batu motifs 2 (centre) and 3 (right). 182
Figure 11.13: Examples of the rim sherds from pottery found at Buttu Batu. 183
Figure 11.14: Reconstruction of a Buttu Batu bowl represented by its base. 184
Figure 11.15: Stone artefacts found during excavation at Buttu Batu: (a) stone axe blank, (b) barkcloth beater fragment (Spit 5), (c) abruptly-backed blade and (d–e) stone flakes with ventral retouch. 185
Figure 11.16: Stone artefacts found during excavation at Buttu Batu: (a–b) pointed flakes, (c–d) blade-like flakes and (e) core. 185
Figure 11.17: Edge-trimmed flakes from Buttu Batu of chert (A) and limestone (B). 185
Figure 12.1: Map of the location of Mansiri site. 192
Figure 12.2: (a) Panorama (facing north) of the site and (b) location at the foot of hill slope. 193
Figure 12.3: Digital elevation (green colour represents low areas and lavender high areas) and site plan of the Mansiri site with the location of previous excavation by Balai Arkeologi Manado (TG-G1 to TG-S’12) and 2015 excavations (Trenches A–D). 194
Figure 12.4: Trench A in plan (a) and section (b) view of the south section. Section drawing (c) of the south section of Trench A. 195
Figure 12.5: (a) View of east section of Trench B, drainage channel in the northern part, which cuts through cultural layers at around 180 cm; (b) Section drawing of all sections of Trench B. 196
Figure 12.6: Example of a dentate-stamped ring-foot stand. 198
Figure 12.7: Examples of rim shapes. 198
Figure 12.8: Selected example of red-painted and dentate-stamp decorated ceramic. 199
Figure 12.9: Selected examples of red-painted, circle-stamped and dentate-stamped decorated ceramics. 199

Figure 12.10: Selected examples of red-painted, circle-stamped and dentate-stamped decorated ceramics. 199

Figure 13.1: Map of the sectors and site locations along the Karama River drainage. 208

Figure 13.2: The Sakkarra site location on a hillock along the bank of the Bonehau River. 210

Figure 13.3: Exposure to a depth of 3 metres by mining activity (left), and an example of the earthenware sherds carpeting the mined area (right). 210

Figure 13.4: A barkcloth beater fragment (left) and glass beads (right) recovered from the surface of the Sakkarra site. 210

Figure 13.5: (a) Stone adze fragment found on the Sakkarra site surface, and (b) a stone adze found along the Bonehau River not far from the Sakkarra site. 211

Figure 13.6: Location of the excavation squares at Sakkarra site. 211

Figure 13.7: Wet sieving (left) and sorting (right) on site during the excavation of the Sakkarra site. 212

Figure 13.8: Stratigraphy of the excavated squares: T2S1 (above) and B2S1 and B3S1 (below). 212

Figure 13.9: Layer of river boulders and cobbles at the floor of the B2S1 and B3S1 excavation squares. 213

Figure 13.10: Iron slag found in Spit 9 in the T2S1 square. 214

Figure 13.11: Glass bracelet fragment found in Spit 7 in the T2S1 square (left), and glass beads found in Spit 6 in the B2S1 square (right). 214

Figure 13.12: Stone adze fragment found in Spit 10 in the T2S1 square (left), and stone barkcloth beater fragment found in Spit 2 in the B3S1 square (right). 214

Figure 13.13: Metal artefact in the shape of a fish hook from Spit 3 in the B3S1 square (left) and river pebble with two parallel incisions from Spit 4 in the B2S1 square (right). 215

Figure 13.14: Polished stone cog with teeth along its perimeter (square T2S1, Spit 11). 215

Figure 13.15: Decorated earthenware pottery from the Sakkarra site. 216

Figure 13.16: Percentages of pottery vessel form based on analysis of rim sherds. 217

Figure 13.17: Box plot diagram of the distribution of the vessels’ rim diameters. 217

Figure 13.18: Reconstruction of the earthenware vessel forms at the Sakkarra site based on rim analysis. The vessel types are scaled to each other based on their average recorded diameters. 218

Figure 14.1: Location of the Sangihe-Talaud Archipelago, the major Talaud Islands, and the sites discussed in the text. 225

Figure 14.2: Stratigraphy of Leang Mande’et showing the location of the two dates recovered (black squares). Layers are indicated by numbers on the section; spits are indicated by horizontal lines within the sections and numbers listed between the south and east profiles. 229
Figure 14.3: Summary diagram of pollen recovered from each spit of Leang Mande’et.  

Figure 14.4: Haplotype network of cytochrome b dataset comprising 367 bp across Rattus rattus complex lineages. Colours of RrC lineage IV haplotypes are blue (IDN–Indonesia), purple (KHM–Cambodia), orange (LAO–Laos), light blue (LKA–Sri Lanka), green (PHL–Philippines), red (VNM–Vietnam), grey (Tal–Talaud). Blue dots represent the number of mutations leading to a haplotype. 

Figure 15.1: Location of Sulawesi Sea and Talaud Islands. 

Figure 15.2: Location of archaeological sites in the Talaud Islands. 

Figure 15.3: Leang Buida (A) and the excavated area in 2005 (B). 

Figure 15.4: Decorated pottery from Leang Buida. 

Figure 15.5: Photographs of clay net sinkers from Leang Buida. 

Figure 15.6: Illustrations of Leang Buida fishing tools. 

Figure 15.7: Suspected lure shanks made from Tridacna shell, with hole from front to back sides (top) and from right to left sides (bottom). 

Figure 15.8: Bukit Tiwing and the excavated test pits. 

Figure 15.9: Excavated Qing Dynasty sherds from Bukit Tiwing. 

Figure 15.10: Excavated spindle whorl from Bukit Tiwing and possible use-wear marks beside the central perforation. 

Figure 16.1: Jizhou sherd recovered during surface survey of the Pattimang Tua site immediately to the northwest of Utii Batue in Luwu. 

Figure 16.2: South Sulawesi with places discussed in the text (suspected pre-Islamic palace centres italicised) and sites with early whiteware/monochrome and Jizhou sherds. 

Figure 16.3: Theodolite survey of Allangkanangnge ri Latanete and collection zones (2005). 

Figure 16.4: Histogram of Allangkanangnge tradeware identifications distributed by half-century AD. 

Figure 16.5: East, south and west stratigraphic sections of TP1, Allangkanangnge ri Latanete, with tradeware datings. 

Figure 16.6: Stratigraphic section of northwest wall of TP2, Allangkanangnge ri Latanete, with tradeware dating. 

Figure 16.7: Stratigraphic section of west wall of TP3, Allangkanangnge ri Latanete, with tradeware datings. 

Figure 16.8: Stratigraphic section of west wall of TP4, Allangkanangnge ri Latanete, with tradeware datings. 

Figure 17.1: Southern Sulawesi with kingdoms and locations mentioned in the text. 

Figure 17.2: Theodolite survey of Allangkanangnge ri Latanete and grouped collection zones (2005). 

Figure 17.3: Allangkanangnge earthenware pottery rim examples. 

Figure 17.4: Dorsal humerus: comparison of Anoa specimen 1847-354 at left and the TP4 fragment at right.
| Figure 18.1 | Relevant place names in South Sulawesi including district boundaries (dashed). | 314 |
| Figure 18.2 | Map of Onto site (not to scale). | 316 |
| Figure 18.3 | Ring-shaped pile of stones at the *Bonto-bontoa* peak. | 318 |
| Figure 18.4 | *Batu Pallantikang*. | 319 |
| Figure 18.5 | *Tai Bassia* line of menhirs. | 320 |
| Figure 19.1 | South and West Sulawesi—main language groups practising Islam and places mentioned in the text. | 328 |
| Figure A19.1 | Wooden grave and gravestones (Type I) at Makam Karaengta Bungaya, Taeng, locally associated with Karaeng Bungaya who died in 1640. | 340 |
| Figure A19.2 | Heaped earth mound grave with crenulated masonry gravestone (Type L) at Kuburan Islam Bontona Songkolo, upstream from Kale Gowa, reportedly associated with a local elite. | 340 |
| Figure A19.3 | Tomb styles in South Sulawesi Islamic cemeteries. | 341 |
| Figure A19.4 | Stoneware jar placed on top of the dome-covered tomb of Syech Yusuf, who was buried at Kale Gowa in 1705. | 343 |
| Figure A19.5 | Gravestone types in South Sulawesi Islamic cemeteries. | 344 |
| Figure 20.1 | Some of the graves found in Dungkait Cemetery, Tapalang Barat, Mamuju District. | 348 |
| Figure 20.2 | Headstone with rectangular cross-section decorated with calligraphic engravings on the upper section of all four faces, Dungkait Cemetery. | 348 |
| Figure 20.3 | Grave with two gravestones, one of them octagonal with a domed top, Dungkait Cemetery. | 349 |
| Figure 20.4 | The third grave with two gravestones mostly buried under the ground surface, Dungkait Cemetery. | 349 |
| Figure 20.5 | The fourth and fifth graves within a retaining wall, Dungkait Cemetery. | 349 |
| Figure 20.6 | The graves of Tomapute Darana, a daughter of a king of Bone, and her husband, Labolong, Dungkait Cemetery. | 350 |
| Figure 20.7 | An example of the graves that are no longer cared for in the Timbu Tosalama graveyard (left); The grave of the *Tosalama* of Timbu, still revered by the local community (right). | 351 |
| Figure 20.8 | Arrow points at the grave of the *Tosalama* of Labuang located near the sea at Pasa’bu village. | 351 |
| Figure 20.9 | The *Tosalama* of Labuang’s grave in deteriorated condition from beach spray abrasion. | 352 |
| Figure 20.10 | The grave of Tonileo with its headstone in the shape of an octagonal cudgel and footstone shaped like a weapon handle. | 353 |
| Figure 20.11 | The Lasalaga (Loda Batu) grave and modern shelter. | 354 |
| Figure 20.12 | The disturbed condition of the Lasalaga (Loda Batu) grave. | 354 |