History, Annotated Gazetteer, and Bibliography of Sarawak Ornithology

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HISTORY, ANNOTATED GAZETTEER, AND BIBLIOGRAPHY OF SARAWAK ORNITHOLOGY

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Sarawak is Malaysia's largest state, covering most of northern Borneo. It has a remarkable history of scientific bird study, starting in the 1840s and growing ever since. To set the stage for the gazetteer, which is the core of this paper, we start with a review of this history and discuss various forces that have influenced the direction of bird research in the state. Following this introduction comes the gazetteer, which is an annotated list of c. 865 sites in Sarawak where birds have been collected, studied, or regularly observed. The gazetteer provides the latitude, longitude, and elevation of each site, and it lists publications, reports, and museum collections associated with each site. The purpose of the gazetteer is to help interested parties locate sites and investigate their research history. It is also intended to help museum curators geolocate specimens for various kinds of studies, including the assessment of bird distributions in relation to habitat change over time. A notable byproduct of the historical review and gazetteer is a bibliography of c. 750 references related to Sarawak ornithology. Another is the identification of areas in Sarawak where birds are better known and areas where they are not.

**KEY WORDS:** Bird, Borneo, Collection, Conservation, Expedition, Museum

### INTRODUCTION

The Malaysian state of Sarawak in northwestern Borneo has been an important center of bird study for 175 years. Much of its ornithology was captured in the four editions of Bertram Smythies’ landmark book, *The Birds of Borneo* (1960, 1968, 1981, 1999), and Mann’s (2008) checklist. In recent years, however, research on birds in Sarawak has exploded, and undoubtedly it will continue to grow apace for years to come. Given this level of interest, we decided to compile a gazetteer of bird fieldwork in the state. It includes the location of as many sites as we could find where birds have been collected, studied, or regularly observed, and it lists publications, reports, and museum collections related to those sites. The purpose of the gazetteer is to help ornithologists plan research on birds and to help museum curators geolocate specimens. To set the stage for the gazetteer (and to include references in the bibliography that are not site-specific), we begin by describing the factors that helped shape ornithology in Sarawak, including geography, history, the swiftlet nest trade, conservation, and methods of scientific inquiry.

**Geography and ornithology**

Sarawak is Malaysia’s largest state (124,450 km², about the size of Java) and can be divided into six topographical zones: coastal mangrove and nipa mudflats (c. 1.4%); peat swamp (c. 12%); and recent marine beach deposits and alluvium, recent riverine alluvium, rolling and moderately steep low hills (slope of 15-30 degrees), and steep hilly and mountainous country with slopes of more than 30 degrees (c. 70%) (Scott 1989:810). Sarawak also has several geographic features that have particularly influenced the study of its birds. **Rivers:** Rivers traditionally supplied access to the interior of Sarawak and, thus, served as the main conduits for exploration and discovery in the early years (Low 1848, St. John 1862, Crocker 1881, Hose 1893a). The longest of Sarawak’s many rivers is the Rajang, c. 350 km. **Mountains:** The wide lowlands and hills of Sarawak were the first areas to be explored by ornithologists but, with respect to discovery, birds in these areas were much the same as those already known from elsewhere in Borneo.

Not until ornithologists reached Sarawak’s high mountains in the northeast, e.g., Duit, Mulu, and Murud (Sarawak’s highest mountain at 2024 m), did they find new species and realize the true extent of Sarawak’s bird diversity (Hose 1893a, Mjöberg 1925). **Shoreline:** Sarawak’s long, north-facing shoreline is a key stopping place for migrating shore and water birds. Early on, ornithologists working from Kuching collected regularly in the Santubong-Buntal area, but not until the 1980s did ornithologists and conservationists start focusing intensively on habitats and the distribution of migrants along Sarawak’s long shoreline (e.g., Parish 1987, Bakewell et al. 2017, Teepol et al. 2021, Yong et al. 2022). **Limestone:** Sarawak is rich in limestone outcrops, with more than 250 limestone hills, half of which are located in Bau and Serian districts (Marzuki et al. 2021). Other outcrops occur in the Mulu-Buda area, middle Baram River, Batu Tuju-Batu Siman area, Niah National Park, Ulu Kakus, Bukit Sarang, and Klingkang Range. Many of these outcrops are nesting sites for edible-nest swiftlets, which are the source of Sarawak’s long-standing swiftlet-nest industry (Lim and Cranbrook 2002, 2014). Because of the number of caves and importance of the nest industry, literature on Sarawak’s swiftlets is far more extensive than that of any other group of birds.

### History of ornithology

Several authors have reviewed the history and progress of Sarawak ornithology. Foremost among these was Smythies, who supplied a “History of Borneo Ornithology” in three editions of his book (1960, 1968, 1999). Others who have described the history of fieldwork in Borneo include Das (2004), who — though focused on herpetology — provided many details about early collectors working on birds. Tom Harrisson, first curator of the Sarawak Museum after World War II, produced a variety of articles updating the public on progress in ornithology during his tenure (e.g., Harrisson 1956, 1959a). Thereafter, several authors described Tom Harrisson’s role in Bornean ornithology and the origins of Smythies’ *The Birds of Borneo* (Hughes 1958, Banks 1961, Medway 1976, Cranbrook 1981, Sreedharan 1996, Davison 1999c, Heimann 1999, Sheldon et al. 2013). Since the last
Sarawak holds a key position in the development of Bornean ornithology largely because of Smythies’ (1960) book, which was written in Kuching and emphasized the birds of Sarawak. The scientific study of Sarawak’s birds, however, started nearly 120 years earlier, towards the beginning of the reign of Rajah James Brooke (1841-1868). From 1845-1848, Hugh Low collected the first bird specimens from Sarawak (Moulton 1914a, Smythies 1999) and published Borneo’s first list of birds as an appendix to his book about Sarawak geography and people (Low 1848). Tommaso Salvadori (1874) produced a formal catalog of Bornean birds, which included, among other records, specimens collected in Sarawak by Giacomo Doria and Odoardo Beccari from 1865-1868 (Beccari 1904, Poggi 2020). Early fieldwork in Sarawak was conducted mainly in easily and safely accessed sites, including those near Kuching, in the mining region of Bau, along western rivers (e.g., Samarahan, Sadong, Lupar, and lower Rajang), and on the coast up to Bintulu (e.g., Wallace 1869, Beccari 1904). Alfred H. Everett was an especially important collector during this period (Walden 1872, Sharpe 1876, 1877b, Everett 1889).
Toward the end of the 19th century, collectors also reached Mt. Penrissen in western Sarawak and Mts. Dulit, Mulu, Batu Song, and Kalulong in eastern Sarawak. On these mountains they discovered species previously known only from the mountains of Sabah, as well as three new Bornean endemics: Dulit Partridge, Hose’s Broadbill, and Black Oriole. During this time period, Charles Hose was the most important collector (Hose 1893a, 1927, 1929). As a government employee from 1884-1907, who spent most of his time in the Baram region, he not only was the first bird collector to explore Sarawak’s eastern mountains, but he also contributed to Sarawak’s ornithology by facilitating the work of other collectors in the region (e.g., Harrisson 1933, Katz 1988, Smythies 1999).

With the founding of the Sarawak Museum in 1888, knowledge about the distribution of Bornean birds increased substantially. At that time, the Sarawak Gazette served as the main local outlet for ornithological information (Cotter 1966). Edward Bartlett, Curator of the Sarawak Museum from 1893-1897, published a series of notes on birds in the Gazette in 1895 and 1896. These were then compiled into a book (Bartlett 1896b). (For completeness, all of Bartlett’s Gazette articles are listed in the References section, but for simplicity only his book is cited in the gazetteer.) J.C. Moulton, curator of the Sarawak Museum from 1909-1915, also published in the Sarawak Gazette and compiled a book based on those articles (Moulton 1915b). Moulton’s most substantial contributions, however, were a description of bird specimens in the Sarawak Museum (Moulton 1914b) and an updated Bornean bird list with a thorough set of citations (Moulton 1914c). Also, in 1911, Moulton founded the Sarawak Museum Journal. From 1922-1924, E.P. Mjöberg, a Swedish zoologist and ethnographer, was curator of the Sarawak Museum. During his short tenure, he explored Mts. Murud, Dulit, and Pueh, and subsequently Batu Tibang (Mjöberg 1923, 1925, 1926, Smythies 1960). European naturalists working in Sarawak in those early years also produced a steady stream of books about their experiences (Low 1846, St. John 1862, Wallace 1869, Shelford 1916, Hose 1926, 1927, 1929, Mjöberg 1930). These books, though illuminating the state of scientific and geographic knowledge in the 19th and early 20th centuries, did not impart much specific information about birds.

In the 1930s until World War II, research on birds took a more modern turn. From June 1932 – January 1933, Oxford University conducted a major expedition to Mt. Dulit, and it also sent researchers to Mts. Mulu, Kalulong, and Batu Song. This expedition yielded a tremendous amount of zoological, botanical, and geographic information (Harrisson 1933, 1955c, Harrisson et al. 1938, Richards 1936, 1952, Ford et al. 1938, Banks 1949b, Shackleton 1938, 1966). Edward Banks, as curator of the Sarawak Museum prior to the War, participated in the Oxford expedition. He also wrote extensively about Bornean bird distribution and biogeography (e.g., Banks 1933a, 1935b, 1937a,b, 1950) and a memoir of his experiences in Sarawak (Banks 1949a).

After the War, Tom Harrisson took over as curator of the Sarawak Museum. This started a rich 20-year period of ornithology in Sarawak: dozens of bird papers were published in the Sarawak Museum Journal and other journals; Oxford University conducted a major expedition to the Usun Apau Plateau (Arnold 1957); Smythies produced his checklist (1957a) and book (1960); Lord Medway (later to become the Earl of Cranbrook) joined the Sarawak Museum staff to start his long, productive career in Malaysia; and Michael Fogden initiated bird ringing and undertook his ground-breaking ecological studies (Fogden 1970, 1972, 1976, McClure and Leelavit 1972).

From the 1970s-1990s, the pace of bird research in Sarawak slowed, but there were definite high points. From June 1977 – September 1978, the Royal Geographical Society led an expedition to Mount Mulu National Park (Hanbury-Tenison and Jermy 1979, Hanbury-Tenison 1980, Anderson et al. 1982, Jermy and Kavanagh 1982), and this expedition featured a substantial ornithological component. In the 1980s, conservation-oriented NGOs started to conduct surveys of birds and habitats, usually working in partnership with the Sarawak Forest Department’s National Parks and Wildlife Office (NPWO). These NGOs included INTERWADER and its later incarnation the Asian Wetland Bureau, the Malaysian Nature Society (MNS), the Wildlife Conservation Society (WCS), and World Wide Fund for Nature Malaysia (WWFM) (e.g., Kavanagh 1981, 1982, Edwards et al. 1986a,b, Howes and NPWO 1986a,b, Bennett 1986, 1989, Parish 1987).

In 1992, basic scientific research in Sarawak received a major boost with the establishment of the Universiti Malaysia Sarawak (UNIMAS). At first, bird research at UNIMAS moved slowly, but in the last two decades dozens of publications and theses have been produced by its faculty and students. Other advances in the 1990s included the establishment of the Sarawak Forestry Corporation and Sarawak Biodiversity Centre and implementation of conservation programs by the Japanese-based NGO, ITTO (International Tropical Timber Organization). These organizations promoted conservation and research at key locations, such as Lanjak-Entimau Wildlife Sanctuary and Batang Ai National Park (Grubh 1994, ITTO 1996, 1999, Meredith 1993, 1995). Combined government, NGO, and UNIMAS efforts inspired a series of conferences and publications highlighting advances in Sarawak natural history (e.g., Sebastian 2000, Tuen and Das 2005, Hon et al. 2007, Das and Tuen 2016). Also starting in the 1990s, bird research was boosted by the ecotourism boom and its associated bird literature (MacKinnon and Phillips 1993, 1999, Pope 1994, Myers 2009, Phillips and Phillips 2009, 2011, 2014, Orenstein et al. 2010, Eaton et al. 2016, 2021, Sivadasan 2017, Wong 2018, Puan et al. 2020).

Another factor promoting natural history research has been the interest of plantation developers and foresters to promote wildlife diversity by establishing High Conservation Value (HCV) holdings (e.g., Stuebing 2007, Stuebing 2015, Hon et al. 2020, Styring et al. 2022). Finally, public access
to natural history information in Sarawak has been advanced by the rapid publication of informative and attractive books by UNIMAS and Natural History Publications (Borneo) (e.g., Rahman et al. 2015b, Mohd-Azlan et al. 2020).

**Specimen collecting**

Sarawak has experienced three basic periods during which bird specimens have been collected for scientific purposes. The first — in the 19th and first half of the 20th centuries—was a long era of exploration, when ornithology consisted mainly of collecting specimens to determine bird distributions and discover new taxa (species and subspecies) and, in some cases, provide income for the collectors. Most of these early specimens went to the British Museum (now called the Natural History Museum, UK), the Sarawak Museum, the Raffles Museum collection (now at the Lee Kong Chian Natural History Museum, Singapore), and private collections, e.g., that of Lord Lionel Walter Rothschild (Stresemann 1975). New taxa described on the basis of these early collections were thoroughly summarized by Chasen (1935c). Nowadays, almost all specimens once held in private collections have been moved to public and governmental museums. As a result, many of Sarawak’s early specimens, especially those collected by Wallace, Everett, and Hose, are scattered widely among museums around the world.

The second period of collecting in Sarawak occurred after World War II, during the reign of Tom Harrisson as curator of the Sarawak Museum, 1947-1966 (Heimann 1999). Harrisson wanted to improve Bornean bird taxonomy and classification in preparation for Smythies’ checklist (1957a) and book (1960). Thus, from 1951-1954, with funding from Loke Wan Tho — the airline magnate, amateur ornithologist, bird photographer, and natural history philanthropist — the Sarawak Museum collected and sent a large number of specimens (called the “Loke/Harrisson Collection”) to Yale University’s Peabody Museum, where S. Dillon Ripley was curator (e.g., Ripley 1942). James Bangga, whose name features prominently in the gazetteer, was appointed senior collector and directed the training and fieldwork associated with this enterprise (Medway 1976). Harrisson also sent specimens to the American Museum of Natural History and the U.S. National Museum for study by Dean Amadon and Herbert Deignan, respectively (e.g., Amadon and Harrisson 1956, Deignan 1957). The quality of Harrisson-era specimens was generally better than those collected before the war, as their labels contained more accurate localities and often information on habitat, food, and other aspects of ecology.

After Harrisson left the Sarawak Museum, very little collecting occurred in Sarawak until the 2000s, when the need for specimens for molecular phylogenetic, population genetic, and ecological studies became critical (Remsen 1995, Sheldon and Whittingham 1997, Rocha et al. 2014). These third-era specimens are particularly valuable, as they are usually accompanied by preserved tissues and blood, stomach contents, endo- and ecto-parasites, photographs, and extensive data (age, molt, fat, habitat, gonad, etc.). Most of these modern specimens are located at UNIMAS, the University of Kansas, Louisiana State University, University of Washington, and the U.S. National Museum. Information about them is available to the public via VertNet.org and iDigBio.org.

**Edible-nest swiftlets**

For centuries, Sarawak has been a major center of trade in edible-nests made by swiftlets, and over the last 90 years a substantial literature has developed on all aspects of swiftlet biology, culture, and economics. Studies pertaining to swiftlets at particular localities are cited in the gazetteer, but there are many non-site-specific publications about swiftlets and their nests. Here are examples based largely on work conducted in Sarawak: general information (Banks 1931, Sims 1959, Medway 1960, Cranbrook and Lim 1999, Lim and Cranbrook 2002, 2014); nesting (Banks 1933b, 1937c, Medway 1969, Leh 1993); nest collecting techniques (Medway 1957); identification and taxonomy (Medway 1961, 1966, Sims 1961, Cranbrook et al. 2013); feeding ecology (Fujita and Leh 2020, Harrisson 1974); echo-location (Medway 1959, Harrisson 1966b); zooarchaeology (Stimpson 2013, 2016); molecular genetic comparisons (Lim and Rahman 2005, Cranbrook et al. 2013, Goh et al. 2018); artificial nest sites (Asma et al. 2022, Cranbrook et al. 2013), nutritional content of edible nests (Quek et al. 2015), and allergens in edible swiftlet nests (Goh et al. 2001).

In Sarawak, there are dozens if not hundreds of swiftlet nesting sites. Many are in caves accessed (by birds and people) through relatively small holes in limestone hills, called lobang. Information on the location of many of these nesting sites is difficult to obtain. Therefore, the gazetteer only includes swiftlet nesting sites that have been identified in published literature.

**Bird Conservation**

The earliest conservation concern with respect to Sarawak’s birds was that uncontrolled collecting of edible swiftlet nests might deplete populations (Banks 1933b, 1937c, Gausset 2004). Not surprisingly, hornbills have also been of interest to conservationists for a long time because of their cultural importance in Sarawak (Harrisson 1951a, 1960a). In the 1960s, Harrisson wrote the first article mentioning possible over-hunting of hornbills (Harrisson 1965a), and that issue — and hornbill conservation in general — have become more pressing through time (Bennett et al. 1997, Yeap et al. 2016, Anon 2017, Amin and Ripot 2018, Jain et al. 2019, Philovenney and Mohd-Azlan 2021). Indeed, shooting Helmeted Hornbills for their casques has reached a crisis stage, threatening the survival of the species (Collar 2015, Beastall et al. 2016).

In the 1960s, conservationists also started to worry about the
Figure 2. Map of Totally Protected Areas (TPAs) in Sarawak (Sarawak Forestry Corporation, April 2023).
fate of Sarawak’s forests. A major conference in Bangkok on “Conservation in South East Asia” notably emphasized Sarawak (Anderson 1968a,b). At that time, only nine bird species in Sarawak were fully protected (see also the “First Schedule” in Chin 1971). Despite this relatively early start, not until the 1980s did the rapid destruction of Sarawak’s forests and the pace of coastal development generate serious concern and consequent action, especially among NGOs, about the future of all birds in the state (Malaysian Wetland Working Group 1987, Parish 1987, Scott 1989, Bennett et al. 1996, Chin 2000, Sebastian 2000, Sreedharan 2004, 2006b, 2010, Lang et al. 2014, Davison 1999a). This action helped spur the gazetttement of an increasing number of Totally Protected Areas (TPAs) by the Sarawak government (Madeline and Rowina Ruth 2020). Unfortunately, despite these efforts, only 3% of Sarawak’s land area retains intact, protected forest (Bryan et al. 2013). An especially important step in Sarawak bird conservation occurred when the Malaysian Nature Society designated Important Bird & Biodiversity Areas (IBAs) in the state (Yeap et al. 2007). The designation of IBAs has helped government officials prioritize areas for particular conservation attention.

In addition to hornbill hunting, the most serious current threat to individual bird species, especially song bird species, is the Southeast Asian cage-bird industry. Straw-headed Bulbul, once among the most common birds in Sarawak (e.g., Smythies 1981), has been all but wiped-out in the state (Yong et al. 2018, Chiok et al. 2019, Sheldon 2022a) and could be the first modern bird species to become extinct in the wild on Borneo. White-rumped Shama is also under serious pressure from the pet trade (Leupen et al. 2018), but fortunately it is not so easily extirpated as the bulbul (Sheldon 2022b). Finally, there is the looming problem of climate change. Its most immediate impact will likely be on montane bird populations, which can go only so high — as rising temperatures push montane forest uphill — before running out of space (Harris et al. 2012, Burner et al. 2019). And, sea level rise will eventually cause a whole new set of problems in Sarawak’s extensive, flat, coastal areas.

The current state of bird research

Most bird research in Sarawak is aimed at understanding the evolutionary forces that created its diverse forest populations and the ecological forces that maintain that diversity. Great strides have been made in determining the basic biogeographic history of Sarawak’s birds. This progress is based on the combined efforts of geologists, paleontologists, botanists, and zoologists over many years and, most recently, advances in genetics and habitat modeling. Genetic comparisons provide sophisticated information on the history of bird species and populations (e.g., Lim et al. 2011, Sheldon et al. 2015, Sheldon et al. 2016, Boyce et al. 2019), while habitat modeling helps predict the occurrence of individual bird species, both in the past and present (e.g., Lim et al. 2011, 2015, Puan et al. 2015). Together these methods provide insight into how populations have moved and interacted over time, given the complex climatic history of Borneo and recent changes in forest extent and structure.

As with evolutionary studies, ecological studies have also benefited from technological advances. The advent of camera trapping in Sarawak (e.g., Mohd-Azlan and Lading 2006, Jailan et al. 2018) has allowed the detection of poorly documented species, particularly ground birds, such as Bulwer’s Pheasant and Bornean Ground-Cuckoo. Automated sound-recording devices and voice-identification analysis not only detect and identify bird species, respectively, but also permit relatively easy study of their daily, monthly, and yearly song activity (e.g., Styring et al. 2022). In addition to technology, the creation of “natural experiments” in areas where logged native forest is preserved to promote biodiversity within or adjacent to plantations (Stuebing 2007) enables study of the influence of plantations on forest bird populations and vice versa (e.g., Sheldon and Styring 2011, Styring et al. 2018, Amit et al. 2019).

Many other types of ecological studies have been conducted in Sarawak and are cited in the gazetteer, but there is a long way to go before we fully understand the forces that maintain bird diversity in Sarawak’s forests. Most studies to date have tried to determine what birds do by applying indirect, rapid analytical methods that take advantage of technology and modeling (e.g., Styring et al. 2011, Mohd-Azlan et al. 2022). Such methods are necessitated by the difficulty and time required to observe the activity of individual bird species. But, if ecology is to inform wildlife managers about maintaining bird diversity, we need to know the direct relationship between forest-disturbance and bird-disturbance. The fact is, unfortunately, that we know very little about what most forest birds in Borneo actually do; we know almost nothing about their foraging, food, nesting, microhabitats, parasites, predators, competition, and so on. The only moderately well-known groups of Southeast Asian forest birds are woodpeckers (e.g., Styring and Zakaria 2004, Lammetink 2004) and hornbills (e.g., Poonswad et al. 2013, Kaur 2020). Although some researchers have started to examine some other groups more closely (e.g., babblers; Mansor et al. 2015, Styring et al. 2016), much work remains. On the positive side, however, while this dearth of knowledge is frustrating when it comes to understanding bird diversity, it is a goldmine for students of ornithology; literally every species of bird in Bornean forests merits more study.

Apart from general ecology, another area in need of study is forest bird migration. Whereas the activities of migratory shore and water birds are reasonably well known do to the vigilance of coastal conservationists and birdwatchers and the relative ease of observing these species (e.g., Bakewell et al. 2017, Teepol et al. 2021), the movement and other activities of forest migrants is poorly understood (Davison 1999b). Judging from the few references on the subject (e.g., Harrisson 1960a,b, Smythies 1963:appendix c, Fogden
1965a, Wells 1985, 1990) almost nothing has been published in the last 25 years on this subject, except a few site-lists that happen to contain migratory species.

**GAZETTEER**

The gazetteer consists of an annotated list of sites organized alphabetically. The best way to find a specific location, however, is by using a search function, as sites may be listed under different headings, spellings, and contexts (e.g., Sungai Baram, “Barram,” Baram District, Kuala Baram, Middle Baram, Ulu Baram).

A typical entry has (in this order) the site name, synonyms, latitude, longitude, elevation above sea level, a list of museums with specimens from the site, a list of specimen collectors, and a list of references about the site and its birds. An entry may also include remarks about habitat, history, and other characteristics. If no latitude and longitude are included with a site, we could not locate the position of that site but its name appears on specimens or in the literature. Some especially important sites (e.g., Gunung Mulu National Park) are provided with an “overview” entry consisting of general information. Locations within that site are entered alphabetically elsewhere in the gazetteer (e.g., Deer Cave, Gunung Mulu National Park).

**Sites included in the gazetteer**

Sites listed in the gazetteer were gleaned from the literature and museum-specimen data (see below). We determined the latitude, longitude, and elevation above sea level of each site with the help of Google Earth Pro, the gazetteers of Mohizah et al. (2006) and BirdLife International (2001), old maps (e.g., from Hose 1893a, Moulton 1912, themaphouse.com, digitalcollections.universiteitleiden.nl), personal experience,

<p>| Table 1. Current administrative divisions, districts, and subdistricts in Sarawak arranged west to east, effective from 2003 (Mohizah et al. 2006). |</p>
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</tr>
<tr>
<td></td>
<td>Matu (Sibu Division/3rd Division)</td>
<td>Igan</td>
</tr>
<tr>
<td>Miri</td>
<td>Miri (Miri Division/4th Division)</td>
<td>Sibuti, Niah-Suai,</td>
</tr>
<tr>
<td></td>
<td>Marudi (Miri Division/4th Division)</td>
<td>Beluru, Long Lama</td>
</tr>
<tr>
<td>Bintulu</td>
<td>Bintulu (Bintulu Division/8th Division)</td>
<td>Sebauh</td>
</tr>
<tr>
<td>Limbang</td>
<td>Limbang (Limbang Division/5th Division)</td>
<td>Nanga Medamit</td>
</tr>
<tr>
<td></td>
<td>Lawas (Limbang Division/5th Division)</td>
<td>Sundar, Trusan</td>
</tr>
<tr>
<td>Kapit</td>
<td>Kapit (Kapit Division/7th Division)</td>
<td>Nanga Merit</td>
</tr>
<tr>
<td></td>
<td>Song (Kapit Division/7th Division)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Belaga (Kapit Division/7th Division)</td>
<td></td>
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</tbody>
</table>
and (in more difficult cases) educated guesses. All latitude and longitude values are approximations, but should be close enough to guide researchers and visitors effectively. The coordinates and elevations of major mountain peaks (and many minor peaks) have been double checked with Peakvisor.com and should be accurate. Synonyms of site names are included so that workers encountering alternative spellings can find sites in the gazetteer. Variations in site names were often caused by mis-transcription of specimen labels or field notes, e.g., “Kucking” for “Kuching” (Sharpe 1876) and “Busan” for “Busau” (Moulton 1914a). Odd spellings were also caused by a lack of formalized names in older times and consequent phonetic guesses by explorers, e.g., “Long Akar” for Long Akah (Hose 1893a).

Usually in the gazetteer, site names are not translated into English. This simplifies reference to many places where geographic descriptors are fundamental to proper names. For example, because of the historic importance of river travel in Sarawak, many names contain the terms kuala, muara, long, and nanga, all of which refer to river junctions, mouths, or estuaries. Thus, we retain these terms and do not abbreviate them in the gazetteer (e.g., Muara Tebas, Long Akah, and Nanga Joh). To help researchers unfamiliar with Sarawak terms, we translate commonly used words in Table 2.

References included in the bibliography


Although references that accompany sites in the gazetteer have been exhaustively compiled, inevitably some are missing, especially unpublished government and NGO reports. Also, we usually do not cite Smythies’ checklist (1957a) and book (1960, 1968, 1981, 1999) or Mann’s checklist (2008) in the gazetteer because to be readily useful such citations need to be accompanied by page numbers or bird species, and that proved too difficult for this project. Instead, like those authors, we rely on original literature and specimen data. Researchers interested in the distribution of individual bird species in Sarawak should consult Smythies and Mann, BirdLife International (2001), and internet sources like birdsoftheworld.com.

Museum data

The lists of museums and collectors accompanying each site in the gazetteer have not been exhaustively researched. We include this information mainly for historical context. Two of the most important collections of Sarawak birds are at the Sarawak Museum and the Natural History Museum, UK. Unfortunately, these two museums do not have specimen databases, which are necessary to assess specimen holdings in a reasonable amount of time. Thus, we do not include these two museums in the gazetteer unless their specimens are mentioned in the literature or are otherwise evident. For example, Yale Peabody Museum and the Sarawak Museum shared specimens from the Loke-Harrisson collection in the early 1950s (Medway 1976). Thus, if Yale has specimens from a site, the Sarawak Museum likely does as well. Also, Oxford University donated the specimens from its two major Sarawak

Table 2. English translation of common Sarawak terms appearing in the gazetteer. Most are from the Malay language; other language sources are noted in parentheses.

<table>
<thead>
<tr>
<th>English</th>
<th>Malay</th>
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<tbody>
<tr>
<td>Ba (=Bah, B': Ricefield (Lun Bawang)</td>
<td>Kerangas: Heath/sandy soil forest</td>
</tr>
<tr>
<td>Bahagian: Division or area</td>
<td>Kuala: Rivermouth</td>
</tr>
<tr>
<td>Banjaran: Mountain range</td>
<td>Loagun: Oxbow or seasonal lake (Berawan)</td>
</tr>
<tr>
<td>Batang: Large river</td>
<td>Lobang (=Lubang): Hole leading to a larger cave</td>
</tr>
<tr>
<td>Batu: Rock (or stone mileage marker)</td>
<td>Long: Rivemouth (Kayan/Kenya)</td>
</tr>
<tr>
<td>Besar: Large</td>
<td>Muara: Estuary</td>
</tr>
<tr>
<td>Bukit: Hill</td>
<td>Nanga: Longhouse, often at a rivermouth (Iban)</td>
</tr>
<tr>
<td>Bung: Hilltop (Bidayuh)</td>
<td>Pa (=P'): Stream and its catchment area (Kelabit)</td>
</tr>
<tr>
<td>Burung (=Burong): Bird</td>
<td>Padang: Field</td>
</tr>
<tr>
<td>Damu: Lake</td>
<td>Pangkalan (=Pengkalan): Landing place</td>
</tr>
<tr>
<td>Giam (=Giram): River rapids (Bidayuh)</td>
<td>Pulau (=Pulo): Island</td>
</tr>
<tr>
<td>Guu: Cave</td>
<td>Rumah: House, often a longhouse in Sarawak</td>
</tr>
<tr>
<td>Gunung (=Gunong): Mountain</td>
<td>Sungai (=Sungei): River</td>
</tr>
<tr>
<td>Jalat: Road</td>
<td>Taman: Park</td>
</tr>
<tr>
<td>Jambatan: Bridge</td>
<td>Telok (=Teluk): Bay or gulf</td>
</tr>
<tr>
<td>Kampung (=Kampong): Village</td>
<td>Tanjung (Tanjong): Promontory or peninsula</td>
</tr>
<tr>
<td>Kecil (=Kechil, Ketchil): Small</td>
<td>Ulu: Headwaters of a river</td>
</tr>
</tbody>
</table>
expeditions (1932 and 1955) to the Natural History Museum, UK. Thus, that museum is listed as having specimens from Oxford’s collecting sites. One further note, the collaboration among UNIMAS, the University of Kansas, and Louisiana State University has been thoroughly documented by Sheldon et al. (2019) and, thus, lists of personnel are not repeated here.

**Abbreviations**

AMNH: American Museum of Natural History, New York, NY, USA
ANSP: Academy of Natural Sciences, Philadelphia, PA, USA
AWC: Asian Waterbird Census
BCL: Borneo Company, Ltd.
Bk: Bukit (hill)
DMNH: Delaware Museum of Natural History, Wilmington, DE, USA
DNWP: Department of Wildlife and National Parks, Kuala Lumpur
FMNH: Field Museum of Natural History, Chicago, IL, USA
FMU: Forestry Management Unit
Gn: Gunung (mountain)
HCV: High Conservation Value
IBA: Important Bird & Biodiversity Area
Kg: Kampung (village)
KU: Biodiversity Institute, University of Kansas, Lawrence, KS, USA
LSU: Louisiana State University Museum of Natural Science, Baton Rouge, LA, USA
MCSNG: Museo Civico di Storia Naturale Giacomo Doria, Genoa, Italy
MCZ: Museum of Comparative Zoology, Harvard University,

**Figure 3.** Heat map of the c. 865 localities in the gazetteer. Each square represents 1/10 degree latitude x longitude, and the color reflects the number of distinct research sites in each square. Note that square color does not indicate the intensity or quality of work at individual sites. For example, although a great deal of research has been conducted in Niah National Park, it is a relatively small area represented by only a few distinct sites. Thus, it is green on the map, rather than yellow or red. Overall, the map indicates areas in Sarawak where most research has been conducted, i.e., near Kuching and Bau, along the coast and rivers, in some parks, and in the Kelabit Highlands. The map also indicates areas that have not received much attention, e.g., the highlands of Belaga and Kapit.
Cambridge, MA, USA
MJC: The Batu Kawa section of Kuching recently developed by the Mudajaya Corporation
MNHN: Muséum national d’Histoire naturelle, Paris, France
MNS: Malaysian Nature Society
MNS-BCC: Malaysian Nature Society – Bird Conservation Committee
NHMUK: Natural History Museum, Tring, UK
NMB: Naturhistorisches Museum Braunschweig, Braunschweig, Germany
NMS: Natural History Museum Stockholm (Naturhistoriska riksmuseet Stockholm), Sweden
NPWO: National Parks and Wildlife Office of the Sarawak Forest Department
OUMNH: Oxford University Museum of Natural History, Oxford, UK
RMC: Raffles Museum Collection at Lee Kong Chian Natural History Museum, Singapore
RMNH: Naturalis Biodiversity Center (Rijksmuseum van Natuurlijke Historie), Leiden, Netherlands
ROM: Royal Ontario Museum, Toronto, Ontario, Canada
RSNB: Institute Royal des Sciences Naturels, Bruxelles, Belgium
Sg: Sungai (river)
SL: Sea level
SMK: Sarawak Museum, Kuching, Sarawak, Malaysia
SMKK: Sabah Museum, Kota Kinabalu, Sabah, Malaysia
SMTD: Staatliches Museum für Tierkunde, Dresden, Germany
SNMS: Staatliches Museum für Naturkunde, Stuttgart, Germany
UCMZ: University of Cambridge Museum of Zoology, Cambridge, UK
UF: University of Florida Museum of Natural History, Gainesville, FL, USA
UNIMAS: Universiti Malaysia Sarawak, Kota Samarahan, Sarawak, Malaysia
USNM: United States National Museum (Smithsonian), Washington, DC, USA
UWBU: University of Washington Burke Museum, Seattle, WA, USA
WIAP: Wetlands International – Asia Pacific
YPM: Yale University Peabody Museum, New Haven, CT, USA
ZMB: Zoologisches Museum, Berlin, Germany

Sites
**Anap Sustainable Development Unit (=ASDU):** 2.5 112.8333
100-300 m. **References:** Hon et al. (2020), Samejima and Hon (2020). **Remarks:** A managed forest area encompassing the Anap-Muput Forest Management Unit (AMFMU), related to Sg. Anap. YPM has a specimen collected at “ANAP HQ” by Smythies in 1949. This was long before ASDU and perhaps came from Long Anap on Sg. Baram (3.062 114.820 130 m).

**Ansok (=Lake Ansok, Long Ansok, Loagan Ansok, Logan Ansok, Loaga Ansok):** 4.228 114.279 5 m. **References:** Hose (1893b:420). **Remarks:** Hose found Black-crowned Night Herons breeding here, but Smythies (1957a) could not locate this site. It is shown clearly on maps in Hose (1893a) and Haddon (1901:295).

**Arang Road, Kuching:** 1.51 110.331 10 m. **References:** Yeap (2002a).

**Arent:** **Museums:** NHMUK. **Collectors:** T. Harrisson. **References:** Stresemann (1937). **Remarks:** This site relates to a Bornean Frogmouth specimen. Stresemann (or perhaps Harrisson before him) noted the locality with a question mark.

**Arur Buluh Betung:** 3.8353 115.5483 1100 m. **References:** Sreedharan (2010).

**Arur Tumuh:** 3.7161 115.4536 1100 m. **References:** Sreedharan (2010).

**Asajaya:** 1.54 110.52 SL. **References:** Gregory-Smith (1995, 1999), MNS-BCC (2001a), Wei et al. (2006), Yeap et al. (2007), Bakewell et al. (2017), Rahman and Tuen (2020). **Remarks:** The Asajaya coast is part of the Bako-Buntal Bay IBA.

**Asal Longhouse, Bario (=Aset):** 3.7500 115.4500 1050 m. **Museums:** UWBM. **Collectors:** L.K. Wang. **References:** Wang (2004).

**Asten Road, Kuching, Overview:** **Museums:** SMK, YPM. **Collectors:** Sliman, Junaidi, A. Abon, Lemin, Kolang, L. Labang. **References:** Harrisson (1951b). **Remarks:** SMJ collected many Loke/Harrisson specimens along this road during 1951-1952.

**Asata Road Mile 2:** 1.57 110.33 5 m. **Museums:** SMK, YPM.

**Bakalalan-Bario Road:** 3.9410 115.5830 1600 m. **References:** Yeap and Yong (2021). **Remarks:** This is a Penan village, which served as a center for Chin’s study.

**Bako-Buntal Bay, Overview (=Bako Bay, Buntal Bay; includes Kampung Buntal and the coast of Bako National Park):** 1.6950 110.4180 SL. **Museums:** MCSNG, SMK, RMC, YPM. **Collectors:** O. Beccari, E. Bartlett, A. Abon, Junaidi, Nyandoh, Gaing, Padan, Kebing, S. Slamgah, J. Bangga. **References:** Everett History of Sarawak Ornithology No. 92 11


**Bako National Park, Site 1:** 1.6760 110.4910 SL. **References:** Bakewell et al. (2017). **Remarks:** A mangrove roosting site.

**Bako National Park, Site 2:** 1.6659 110.4967 SL. **References:** Bakewell et al. (2017). **Remarks:** A small rock on mudflats.

**Bako Road** (=Jalan Bako): 1.587 110.410 5 m. **References:** MNS-BCC (2002b).

**Bako-Sema Coastline:** **References:** Sebastian (2005). **Remarks:** Sebastian surveyed from Bako National Park (1.7 110.5) to Kuala Semera (1.57 110.67).

**Bakun Hydro-Electric Power Zone (HEP):** 2.8333 109.5-115.667 70 m. **References:** Tuen (2006), Dagang et al. (2017).

**Bakun Islands National Park:** 2.5200 113.8300 200-470 m. **Remarks:** A park consisting of 5528 ha of islands in a huge lake.

**Balai Ringin:** 1.0470 110.7490 15 m. **References:** Banks (1935b).

**Baleh National Park** (=Ulu Baleh, Baleh Headwaters IBA): 1.5700 114.3500 400 m. **References:** Yeap et al. (2007), Mohd-Azlan et al. (2019a). **Remarks:** A 66,721 ha park and part of the Baleh-Semeni IBA.


**Bampfylde Road, Kuching:** 1.5410 110.3500 20 m. **References:** Gregory-Smith (1995).

**Bangunan Sultan Iskandar, Kuching:** 1.5332 110.3590 15 m. **References:** MNS-BCC (2001a).

**Ban Hock Wharf, Kuching:** 1.5600 110.3410 3 m. **References:** Harrisson (1967), Chin (1968), McClure and Leelavit (1972:338). **Remarks:** A site on Sg. Sarawak in Kuching where swallows and swifts were ringed by SMK in 1966-1968. The wharf has since been removed.

**Banjaran Derian** (=Derian Range): 3.8780 115.2710 1740 m. **Museums:** SMK. **Collectors:** J.C. Moulton. **References:** Moulton (1912, 1914a), Harrisson and Hartley (1934). **Remarks:** This range is within modern-day Pulalong Tau National Park. See also Selinguid.

**Banting** (=Banting Lingga, Banteng, Bangkang): 1.2833 111.2000 5-55 m. **Museums:** MCMSSG, YPM. **Collectors:** O. Beccari and G. Doria, J. Gaun. **References:** St. John (1862), Beccari (1904).

**Baram District** (=Sungai Baram, Batang Baram, Barram): **Museums:** AMNH, ANSP, FMNH, RSNB, MCZ, MNHN, MNS, NHMUK, RMC, RMNH, ROM, RSNB, SMK, SMTD, UCMZ, USNM. **Collectors:** C. and E. Hose, A.H. Everett, W.H. Furness, J.C. Moulton, Janitan, Gerard, E. P. Mjöberg. **References:** Everett (1889), Meyer (1891), Sclater and Shelley (1891), Hose (1893a,b), Sharpe (1889c, 1893a:part IV), Forbes and Robinson (1989), Hartert (1902), Moulton (1914a, 1915), Williams (1914), Hartert (1916), Chasen and Kloss (1929), Harrisson and Hartley (1934), Banks (1935b), Stresemann (1938), Gibson-Hill (1949:160), Vooos (1950b, 1951), Harrisson (1957), Harrisson and Smythies (1959), Duckett (1985), Katz (1988), Witt and Sheldon (1994a), Gregory-Smith (1997b), Long and Collar (2002), Gawin (2014). **Fischer et al. (2017). Remarks:** Baram district is not a modern political unit. However, in the days of Charles Hose, it was. The district covered the river and its tributaries, which were administered by Hose as a government officer in the late 19th and early 20th centuries.

**Barawak, Kuching:** 1.5833 110.3333 10 m. **Museums:** YPM.

Batu Laga National Park: 2.4500 113.9167 1128 m. References: Yeap et al. (2007). Remarks: A 38,874 ha park and part of the Hose-Laga IBA, adjacent to the northeastern side of Hose Range. This park lies on the Batu Laga Plateau and is part of the Sarawak Wildlife Corridors project (Brodie et al. 2015).


Batu Tuju: 3.03 114.95 750 m. Remarks: Along with Batu Siman, a swiftlet nesting area.

Bau, Overview (=Bow, Ban): 1.41110.15 15 m. Remarks: A major area for 19th century collecting and modern-day research and birdwatching. In the early Brooke era, mineral deposits near

Wang (2004), Moyle et al. (2005), Yeap et al. (2007), MNS-BCC (2009b), Abghani (2010), Yong and King (2010), Sheldon et al. (2013, 2019), Boyce et al. (2019). Remarks: The Kelabit Highlands is an IBA. It comprises a high elevation plateau (c. 1000-1100 m) surrounded by higher mountains. It is centered, politically, at Bario.


Remarks: A 24,040 ha park contiguous with Lanjak-Entimau Wildlife Sanctuary. Together, the park and the sanctuary constitute the Lanjak-Entimau Wildlife Sanctuary IBA.


Batu Bungan: 4.0530 114.8150 30 m. Remarks: Gunung Mulu National Park airport and a Penan long house are located here.


Batu Kawa (=MJC): 1.5167 110.3270 15 m. Museums: SMK, YPM. Collectors: Dasar, Junaidi. References: Fogden (1965b), Harrisson (1967), McClure and Leelavit (1972). Remarks: A section of western Kuching where Stapok Road crosses Sg. Sarawak. There was a hill and forest along Stephen Yong Road at Batu Kawa (Bk. Stapok, Stapok Hill, Abg Cheng Ho Quarry) where birds were commonly collected or ringed by SMK staff (McClure and Leelavit 1972:338-340). The hill has been completely leveled for construction material. More recently, a new Kuching township (MJC) has been developed in this area by the Mudajaya Corporation, and Batu Kawa is now commonly called MJC. Birds are often watched in the undeveloped land north of this area (see MJC Forest).


Batu Laga National Park: 2.4500 113.9167 1128 m. References: Yeap et al. (2007). Remarks: A 38,874 ha park and part of the Hose-Laga IBA, adjacent to the northeastern side of Hose Range. This park lies on the Batu Laga Plateau and is part of the Sarawak Wildlife Corridors project (Brodie et al. 2015).
Bau (e.g., gold and cinnabar), easily accessed via the west branch of Sg. Sarawak, led to the development of mining operations, which provided amenities for collectors.

**Bau Lake (=Tasik Biru):** 1.4140 110.1500 13 m. **References:** Anon (1958).

**Bau Limestone Area, Overview (=Bau Caves):** 1.4100 110.1500 20-400 m. **Museums:** NHKUK, RMNH, SMK. **References:** Wallace (1869), Williams (1914), Harrisson (1950a, 1958b, 1962b), Gregory-Smith (1995, 1996), MNS-BCC (2002b), Lee (2004), Cranbrook (2004), Sim and Kong (2004), Rahman et al. (2004), Yeap et al. (2007). **Remarks:** A Malaysian IBA (Yeap et al. 2007), the Bau limestone hills make up a narrow band starting at Bau and extending approximately 23 km to the southwest, reaching the Kalimantan border. The limestone also extends along a portion of the east branch of Sg. Sarawak and southeast to the Sg. Kayan (=Ulu Sadong), upstream of the fort was moved to Paku, Bau.

**Bawang Takung (=Tekum, Takon):** 3.667 114.75 1000-1433 m. **Museums:** RMC, SMK. **Collectors:** J.C. Moulton, Jantan, Ketib.

**Bejalong:** 2.4333 112.6500 180 m. **Museums:** AMNH, NHMUK. **Collectors:** Brook, H.C. Robinson. **References:** Stresemann (1937).

**Bekenu:** 4.0583 113.8416 10 m. **References:** Harrisson (1963a).

**Belaga (=Kuala Belaga, Balaga):** 2.7000 113.7833 55 m. **Museums:** SMK. **References:** Chasen and Kloss (1929), Smythies (1957a), Gawin (2014). **Remarks:** Smythies' reference is in regard to Gray-headed Fish-Eagle.

**Belansat (=Belangsat, Balingsat, Melipat):** 4.9042 115.3958 10 m. **References:** Banks (1935b), Sim et al. (2006). **Remarks:** Mentioned by Banks (1935b) as a nesting site for Lesser Adjutant. Sim et al. (2006) noted that Sg. Belansat is actually Sg. Melipat. There is also a Belansat Forest Reserve (4.9070 115.3910 20 m).

**Belawai:** 2.2333 111.2167 5 m. **References:** Voous (1959).

**Belawai Beach:** 2.0469 111.1905 SL. **References:** Mizutani et al. (2006a, 2007), Bakewell et al. (2017). **Remarks:** Extensive sand bar.

**Belidad (=Belida, Bilida, Blida, Bellida):** 1.44 110.22 5 m. **Museums:** NHMUK, MCSNG. **Collectors:** O. Beccari and G. Doria, A.H. Everett. **References:** Sharpe (1877a), Beccari (1904). **Remarks:** Belidad was a fort built opposite Siniawan on Sg. Sarawak and was the disembarkation point for trips to Rajah Brooke's bungalow (Peninjau) on Gn. Serumbu. In 1871, the fort was moved to Paku, Bau.

**Beraya Beach:** 4.2114 113.8954 SL. **References:** Bakewell et al. (2017).

**Betong:** 1.4125 111.525 10 m. **Museums:** NHMUK, MNS, RMC, SMK. **Collectors:** H.C. Robinson, S. Mengga, F. Adelborg. **References:** Robinson and Kloss (1919), Hill (1960), Yeap (2002a).

**Bidang (=Kampung Bidang):** 4.6900 114.8200 10 m. **Museums:** SMK. **Collectors:** J.C. Moulton. **References:** Moulton (1912).

**Bintulu:** 3.1667 113.0333 5 m. **Museums:** NHMUK, SMK. **Collectors:** A.H. Everett. **References:** Sharpe (1877b), Everett (1889), Beccari (1904), Moulton (1914a), Williams (1914), Banks (1926, 1935b), Roe (1953a), Smythies and Harrisson (1956), Anon (1958), Solomonsen (1960), Smythies (1963), Harrisson (1964c, 1966a), Medway (1970), Duckett (1985), Sheldon (1985, 1987), Gregory-Smith (1995, 1996, 1997b), Fujita and Leh (2020). **Remarks:** Everett worked from the mouth of the “main Bintulu river” (=Sg. Kemena) to the “Jilalong” (=Jelalong) and Tubau branches (Sharpe 1877b). The Bintulu airport visited by Duckett (1985) and Gregory-Smith (1996) was in the middle of the town. The new airport was build in 2003.

**Bongkisam, Santubong:** 1.7192 110.3225 5 m. **Museums:** YPM. **Collectors:** Junaidi, Puding, A. Anyi, Jamili, Padan. **Remarks:** Tom Harrisson had an archaeological dig at Bongkisam on Sg. Jaong.

**Brooketon (=Muara in Brunei):** 5.0000 115.0600 5 m. **Museums:** SMK. **References:** Moulton (1912, 1914a). **Remarks:** Moulton (1914a) attributes a Brooketon specimen of Cinnamon Bittern to Sarawak, but it is really from Brunei (see Map in Moulton 1912). Confusion stems from the odd history of the Brooketon coal mine.


**Brunei Bay, Overview:** 4.9600 115.4500 SL. **References:** Haji Sahat (1987), Yeap et al. (2007), Bakewell et al. (2017). **Remarks:** A Malaysian IBA bordering Brunei, the Limbang and Lawas Districts of Sarawak, and southwestern Sabah. Brunei Bay is one of the most important wintering sites for...
migratory waterbirds along Borneo’s northern coastline. Its large expanses of mudflats and numerous small islands and exposed sand/mud banks, located within a large, deep bay, provide a sheltered, food-rich environment with numerous high-tide roosts (Yeap et al. 2007).

Brayun Road, Sri Aman (=Bryon): 1.22 111.48 20 m. Museums: SMK, YPM. Collectors: R. Nangang.

Bukar: 1.2500 110.4800 10 m. Museums: RMC. References: Garg et al. (2022), Rheindt et al. (2022). Remarks: Bukar refers to a Bidayu lingual group in Samarahan (as opposed to Sadong). This collecting site, therefore, probably refers to a general area in Samarahan.

Bukitan Road, Kuching (Jalan Bukitan): 1.530 110.531 15 m. References: Deakin (1964).


Bukit Batu Ribin (Bukit Ribin): 1.5346 114.5847 1774 m. References: Mjöberg (1926, 1930), Smythies (1945), Haile and Kirk (1957), Yeap et al. (2007). Remarks: An iconic mountain near the Kalimantan Border, now within Baleh National Park and Baleh Headwaters IBA.

Bukit Buak: 2.9167 112.9167 630 m. Remarks: A proposed nature reserve c. 8 km NE of Tatu.

Bukit Buak, Payeh Highlands: 3.956 115.612 1100 m. Remarks: This is different from Gunung Buak near Bario.

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**Bukit Sari:** 4.9390 115.3920 130 m. References: Sim et al. (2006).


**Bukit Selikan** (=Silikan, Salikan): 3.5083 114.0667 801 m. Museums: ANSP, NHMUK, RMNH, USNM. Collectors: C. and E. Hose. References: Harrisson and Hartley (1934). Remarks: This mountain is on the inside of the curve as Sg. Tinjar turns sharply from northwest to northeast.

**Bukit Semabang:** 1.225 110.8875 338 m. References: Wallace (1869).

**Bukit Sengayah, Lanjak-Entimau Wildlife Sanctuary:** 1.5866 112.2824 871 m. References: Yeap et al. (2007).

**Bukit Setian** (=Setian Hill): 2.9903 112.9311 100 m. Museums: LSU. References: Sheldon et al. (2019).

**Bukit Siban:** 1.833 111.5166 255 m. Museums: AMNH.

**Bukit Sibau:** Museums: AMNH. Remarks: The AMNH specimen could be from any number of Sibau hills, e.g., in Betong (1.3999 111.5332 47 m), south of Kuching (1.2236 110.4115 418 m), or south of Serian (0.9970, 110.5743 531 m). Bukit Sibau on the specimen label could also be a mis-transcription of Bk. Siban.


**Bukit Tiang Laju:** 1.071 111.6537 899 m. Museums: MCSNG, SMK. Collectors: O. Beccari. References: Beccari (1904). Remarks: Beccari spent 3 nights on the top of Bk. Tiang Laju. Tiang Laju is close to Bk. Tangga Saran (895 m).

**Bukit Tiban National Park:** 3.4516 113.4313 50-212 m. Remarks: An 8000 ha park 20 km SE of Bintulu. It consists of logged forest surrounded by oil palm.


**Bunan Gega** (=Bunan Gaga): 0.8208 110.5333 60 m. References: Fogden (1965b).

**Bungai Beach:** 4.0670 113.7880 SL. References: Bakewell et al. (2017).


**Camp 1, Summit Trail, Gunung Mulu National Park:** 4.0510 114.8570 240 m. Museums: LSU. References: Burner et al. (2016), Sheldon et al. (2019).

**Camp 2, Summit Trail, Gunung Mulu National Park:** 4.0430 114.8710 520 m. Museums: LSU. References: Burner et al. (2016), Sheldon et al. (2019).

**Camp 3, Summit Trail, Gunung Mulu National Park:** 4.0380 114.8880 80 m. Museums: LSU. References: Burner et al. (2016), Sheldon et al. (2019).

**Camp 4, Summit Trail, Gunung Mulu National Park:** 4.0450 114.9140 1820 m. Museums: LSU. References: Burner et al. (2016), Sheldon et al. (2019).

**Camp 7, Summit Trail, Gunung Mulu National Park:** 4.0340 114.8770 880 m. Museums: LSU. References: Burner et al. (2016), Sheldon et al. (2019).

**Camp Belia:** 2.7074 111.4697 SL. References: Bakewell et al. (2017). Remarks: Recreation area near a school.

**Church Camp, Gunung Murud:** 3.9260 115.5146 2110 m. Museums: UNIMAS. References: Rahman et al. (2005), Orenstein et al. (2010), MNS-BCC (2011a,c), Ramji et al. (2012b), Sreedharan (2014).

**City South Park, Kuching** (=Kuching South City Council Garden Park, Majlis Bandar Kuching Selatan, MBKS): 1.550 110.363 5 m. References: Tan (2017b). Remarks: This park is in the same area as the city swimming pool.

**Damai Beach, Santubong National Park:** 1.7480 110.3120 SL. References: Gregory-Smith (1995, 1996, 1997b, 1999),
Danau Mujan National Park (=Binyo-Penyilam Wetlands; includes Binyo-Penyilam Swamp Forest): 2.90 113.36 30 m. **References:** Yong (2006), Styring et al. (2022). **Remarks:** A 3841 ha park of peat swamp and freshwater swamp associated with Sg. Penyilam. Yong (2006) found Bonaparte’s Nightjar within this area at Pengkalan Keropok (=Pangkalan Keropok).

Danu, Padawan Limestone Area: 1.2920 110.2250 125 m. **References:** Mansor et al. (2011). **Remarks:** Primary and secondary forest, and kerangas.

Danum-Linau IBA: 2.5000 114.9167 200-1846 m. **References:** Harrisson (1966a), Rahman et al. (2002), Yeap et al. (2007).

Deer Cave, Gunung Mulu National Park (=Lubang Rusa, Lobang Piau, Gua Payau, Gua Payan): 4.0233 114.8206 90 m. **Museums:** UNIMAS, LSU, KU, SMK. **Collectors:** E. Banks, T. Harrisson. **References:** Banks (1935a), Harrisson (1952a), Kemp and Kemp (1974, 1976), Wells et al. (1979), Chapman (1985), Hall (1996), Sheldon et al. (2019). **Remarks:** A famous limestone cave and birdwatching site near park headquarters.

Dered Krian National Park, Bau Limestone Area: 1.3800 110.1600 50-300 m. **References:** Pang et al. (2018), Juliana and Gawin (2020). **Remarks:** A 1339 ha park.

Dewan Suarah: 1.4136 110.1569 20 m. **References:** Shazali et al. (2016). **Remarks:** Urban building.

Durafarm Oil Palm Plantation: 1.3993 111.4073 12 m. **References:** Amit et al. (2012, 2014, 2015, 2021), Amit (2015), Ramji et al. (2016). **Remarks:** This site is c. 12 km west of Betong. It consists of oil palm planted over drained peat swamp. Cermat Ceria Forest is next to Durafarm Oil Palm Plantation.

East of Sampadi Beach: 1.6980 110.0130 SL. **References:** Bakewell et al. (2017).

Elite Honour Camp: 1.5600 114.1880 250 m. **References:** Pang et al. (2018), Tuen et al. (2018). **Remarks:** Logged forest.

Fairy Cave Nature Reserve, Bau Limestone Area: 1.3817 110.1171 50 m. **References:** Sarawak Forest Department (1992), MNS-BCC (2001b,c, 2002b,c), Yeap (2002a), Sim and Kong (2004). **Remarks:** A 56 ha nature reserve. See Bukit Kapur, where Fairy Cave is located.

First Count Camp: 1.5949 113.7881 125 m. **References:** Pang et al. (2018).

Gedong (=Kampung Gedong): 1.2500 110.6800 5 m. **Museums:** SMK, YPM. **Collectors:** Narawi, Junaidi, Nyandoh, Junaidi. **References:** Witt and Sheldon (1994b), Moyle et al. (2005).

Golf Club Sarawak, Kuching: 1.5920 110.3470 10 m. **References:** Wei et al. (2009). **Remarks:** This is the current location of Kuching’s golf club. Gregory-Smith (1999) may have been referring to this site when he reported a bird record at Santubong golf course.

Grigat Beach: 2.0372 111.1930 SL. **References:** Bakewell et al. (2017). **Remarks:** Beach, sand flats, and casuarinas.

Gua Bayang, Kampung Kakeng: 1.1583 110.458 100 m. **References:** Banks (1935b:319).

Gua Klipi, Gunung Padadan, Pichin: 1.1083 110.47916 100 m. **References:** Banks (1935b:319).

Gua Prau, Gunung Mulu National Park: 1.1330 114.8930 1750 m. **References:** Collins et al. (1984), Chapman (1985). **Remarks:** A limestone peak on the northwest side of the park and on the south side of Melinau Gorge. Collins et al. (1984) reported on flora and some mammals, but not birds.

Gunung Apad Runan (=Apud Runan): 3.4505 115.5867 2080 m. **Museums:** SMK. **Collectors:** T. Harrisson. **References:** Harrisson (1949a), Smythies (1957a).


Gunung Aup, Bau Limestone Area: 1.3625 110.05 145 m. **References:** Sim and Kong (2004). **Remarks:** Limestone outcrop near Gunung Jagoi.


Gunung Buda Summit, Gunung Buda National Park: 4.2076 114.9489 963 m.

Gunung Chupak: 1.2389 110.4250 143 m. **References:** Banks (1935b). **Remarks:** A swiftlet nesting site.

Gunung Derian (possibly =Bukit Batu Iran): **Museums:** SMK. **Collectors:** J.C. Moulton. **References:** Moulton (1912, 1914a), Mjöberg (1925). **Remarks:** Moulton (1912) includes a map showing Gn. Derian, but according to Mjöberg (1925) the map in general is inaccurate, and no one has mentioned Gn. Derian since. See Batu Iran.

Gunung Doa Trailhead, Kelabit Highlands (=Do’a, Prayer Mountain): 3.75 115.44 1085 m. **Remarks:** This is a popular bird watching trail in Pulong Tau National Park.

Gunung Doya, Bau Limestone Area: 1.3823 110.1684 316 m. **References:** Sim and Kong (2004). **Remarks:** Limestone


Gunung Dulit Summit: 3.3572 114.1748 1284 m.


Gunung Gading Summit, Gunung Gading National Park: 1.7134 109.8362 965 m.


Gunung Lasak: 1.6506 110.4903 114 m. References: Bakewell et al. (2017). Remarks: The highest point on the promontory forming the south side of Awar Bay (=Telok Awar). It was used by Bakewell et al. (2017) as a viewpoint.


Gunung Merinjak, Ulu Sadong (=Merinjak): 1.0330 110.2502 736 m. Museums: SMK. Collectors: J.C. Moulton. References: Moulton (1914c). Remarks: Moulton reached the mountain “on the Dutch border” by traveling up Sg. Sadong/Kayan and then Sg. Suhuh. He collected specimens on the mountain for 11 days before heading back past the southern end of Gn. Sepedang (=Sepadang, 1.090 110.3252 828 m) to Kampung “Sennah” at the foot of Penrissen. He then reached Kuching via Sg. Sarawak. Moulton noted that Merinjak held the last substantial “stretch of old jungle” in the Ulu Sadong.


Gunung Murud Kecil: 3.3340 115.1310 1626 m. Museums: NHMUK. Collectors: C. Hose. References: Berryman and Boakes (2023). Remarks: Specimens purported to be from Gn. Murud by Hose are more likely from this site, which is relatively easily accessed from Sg. Baram via Sg. Selungo (Berryman and Boakes 2023).


Gunung Selinguid: Museums: SMK. Collectors: J.C. Moulton. Remarks: Moulton (1912). Remarks: Moulton (2012) includes a map, showing Selinguid as a peak between the Derian Range and Batu Lawi, but according to Mjöberg (1925) Moulton’s map is inaccurate.


Gunung Silabur (=Bukit Silabur, Selebor; includes Silabur Cave): 0.9542 110.5103 40 – 410 m. References: Banks (1935b:319, 1949a), Harrisson (1950a:330). Remarks: This site has a hiking trail (starting at 0.9693 110.5197 40 m) leading to Silabur Cave, which is a large swiftlet cave whose nests (at least in former times) were shared by Kg. Lobang Batu, Kg. “Semambong,” and Kg. “Seginting.”


Gunung Tai Ton, Bau Limestone Area (=Taiton): 1.4000 110.1330 74 m. References: Williams (1914), Sim and Kong (2004). Remarks: Limestone outcrop. This was an old gold mining area between Wind and Fairy caves of Bau.


Remarks: The UNIMAS expedition described in Ghazally (1998) surveyed and netted birds in the vicinity of the old Bario water-supply dam.


Industrial area adjacent to Kuching Wetlands National Park: 1.5956 110.425 10 m. References: Razak et al. (2019).


Jalan Song, Tabuan Jaya: 1.5217 110.3833 10 m. References: Rahaman et al. (2015a), Razak et al. (2019).


Jukon, Paku: Museums: SMK, YPM. Collectors: J. Bangga. References: Gawin (2014). Remarks: Many forest and riverine specimens at SMK and YPM come from this site. It probably is located along Sg. Paku in the region of Spaoh.


Kampung Bintawa: 1.5667 110.3833 5 m. Museums: SMK, YPM. Collectors: Junaidi, Narawi.

Kampung Brui: 2.7083 111.375 10 m. References: Wei et al. (2009).


Kampung Jernang: 1.6333 110.4500 15 m. **References:** Banks (1935b:319).

Kampung Masjid: 4.5840 113.986 SL. **References:** Bakewell et al. (2017).

Kampung Masjid Noor Islam: 4.9557 115.4116 SL. **References:** Sim et al. (2006), Bakewell et al. (2017).


Kampung Melayu, Samarahan: 1.409110.525 SL. **References:** Bakewell et al. (2017).

Kampung Melipat: 4.9230 115.3889 SL. **References:** Bakewell et al. (2017).

Kampung Mentong Merau (=Mantung Merau): 0.9833 110.6000 25 m. **References:** Bennett et al. (2000).

Kampung Muyu-Jelatong (=Kampung Manchu): 4.9793 115.5835 30 m. **Museums:** LSU. **References:** Sheldon et al. (2019).

Kampung Nelayan Bintawak: 1.566 110.3791 5 m. **Museums:** SMK, UF. **Collectors:** Junaidi. **References:** Harrisson (1951b), Witt and Sheldon (1994b). **Remarks:** Kerangas.

Kampung Nyiru (=Nyiru Grait): 1.361 110.274 15 m. **Museums:** YPM. **Collectors:** Dasar.

Kampung Pasir Pandak (=Pasir Pomolak, Pasir Pondok): 1.6700 110.3200 5 m. **Museums:** RMC, SMK, YPM. **Collectors:** Jamili, T. Harrisson.

Kampung Jerijeh: 2.1416 111.175 SL. **References:** MNS-BCC (2001a), Yeap (2001b).

Kampung Kuala Sibuti (includes Sungai Sibuti): 3.9833 113.7333 SL. **References:** MNS-BCC (2002c), Bakewell et al. (2017). **Remarks:** Also see Sibuti Wildlife Sanctuary.

Kampung Kuap: 1.4083 110.3625 20 m. **References:** Asrif et al. (2018). **Remarks:** Rice paddy.

Kampung Luba: 1.7050 110.1820 SL. **References:** Bakewell et al. (2017).

Kampung Lumut: 4.8700 115.3047 15 m. **Museums:** SMK. **References:** Anon (1958).

Kampung Gaya Lama: 4.8158 115.3742 20 m. **Museums:** LSU. **References:** Gawin (2014), Sheldon et al. (2019).

Kampung Gumbang (=Gombang): 1.2753 110.0542 130 m. **References:** Danstine (2017), Juliana and Gawin (2020). **Remarks:** Mixed dipterocarp forest, kerangas, limestone shrubs.

Kampung Jaie: 1.5433 110.727 5 m. **References:** MNS-BCC (2001a), Yeap (2001b).

Kampung Jepak: 2.9120 112.0970 SL. **References:** Bakewell et al. (2017).

Kampung Jerijeh: 2.1416 111.175 SL. **References:** MNS-BCC (2001a), Yeap (2001b).

Kampung Kaliaga (=Kalakah): 1.3833 110.7416 5 m. **Museums:** LSU. **References:** Moulton (1914a).

Kampung Kuala Sibut (includes Sungai Sibuti): 3.9833 113.7333 SL. **References:** MNS-BCC (2002c), Bakewell et al. (2017). **Remarks:** Also see Sibuti Wildlife Sanctuary.

Kampung Kuap: 1.4083 110.3625 20 m. **References:** Asrif et al. (2018). **Remarks:** Rice paddy.

Kampung Luba: 1.7050 110.1820 SL. **References:** Bakewell et al. (2017).

Kampung Lumut: 4.8700 115.3047 15 m. **Museums:** SMK. **References:** Anon (1958).

Kampung Jernang: 1.6333 110.4500 15 m. **References:** Banks (1935b:319).

Kampung Masjid: 4.5840 113.986 SL. **References:** Bakewell et al. (2017).

Kampung Masjid Noor Islam: 4.9557 115.4116 SL. **References:** Sim et al. (2006), Bakewell et al. (2017).


Kampung Melayu, Samarahan: 1.409110.525 SL. **References:** Bakewell et al. (2017).

Kampung Melipat: 4.9230 115.3889 SL. **References:** Bakewell et al. (2017).

Kampung Mentong Merau (=Mantung Merau): 0.9833 110.6000 25 m. **References:** Bennett et al. (2000).

Kampung Muyu-Jelatong (=Kampung Manchu): 4.9793 115.5835 30 m. **Museums:** LSU. **References:** Sheldon et al. (2019).

Kampung Nelayan Bintawak: 1.566 110.3791 5 m. **Museums:** SMK, UF. **Collectors:** Junaidi. **References:** Harrisson (1951b), Witt and Sheldon (1994b). **Remarks:** Kerangas.

Kampung Nyiru (=Nyiru Grait): 1.361 110.274 15 m. **Museums:** YPM. **Collectors:** Dasar.

Kampung Padang Pan (=Plaman Padang Pan): 1.3131 110.0569 40 m. **References:** Juliana and Gawin (2020). **Remarks:** Mixed dipterocarp forest, fruit orchard, secondary forest.

Kampung Paloh (=Kuala Paloh, Palo): 1.7833 111.1000 SL. **References:** Banks (1935b), Edwards et al. (1986a,b), Edwards and Polshek (1887), Wei et al. (2009).

Kampung Pangkalan Kuap: 1.4375 110.3583 10 m. **References:** Bartlett (1896b), Lim (1965). **Remarks:** Rubber and rice paddy in the 1960s.

Kampung Pangkalan Lobang (=Pankulan Lubang): 3.824 113.76 20 m. **Museums:** LSU, SMK. **References:** Harrisson (1967), Kemp and Kemp (1974), Gawin (2014), Sheldon et al. (2019). **Remarks:** This site is adjacent to the Niah National Park HQ.

Kampung Pasir Pandak (=Pasir Pomolak, Pasir Pondok): 1.6700 110.3200 5 m. **Museums:** RMC, SMK, YPM. **Collectors:** Jamili, T. Harrisson.


Kampung Senau: 2.865 111.875 2 m. References: Bakewell et al. (2017).


Kampung Sungai Buah: 1.693 110.312 SL. Museums: YPM. Collectors: S. Slamgah, A. Abon.


Kampung Sungai Merapok (=Merabok River, Merapok Hills,
Marabok): 4.9725 115.5864 50 m. **Museums:** AMNH, NHMUK, NMB. **Collectors:** J. Waterstradt. **References:** Blasius (1901), Smythies (1957a), Stresemann (1937). **Remarks:** J. Waterstradt collected extensively on Sg. Merapok and in nearby Sabah.

**Kampung Sungai Rait:** 4.1000 113.8667 10 m. **Museums:** LSU. **References:** Sheldon et al. (2019).

**Kampung Sungai Tengah** (=Sungei Tengah): 1.5500 110.2500 5 m. **Museums:** SMK. **Collectors:** G. Dalton. **References:** Moulton (1914a).

**Kampung Surabaya** (=Kampung Sourabaya): 1.5611 110.3528 15 m. **Museums:** SMK, YPM. **Collectors:** Junaidi.

**Kampung Taaee, Serian** (=Tai, Tai’l, Ta’ee, Taie, Ta-ee, Ta-ii, Munggu Babi, Mungo Babi): 1.2060 110.4670 25 m. **References:** Banks (1935b), Anon (1958), Medway (1958a, 1970), Gregory-Smith (1997b), MNS-BCC (2001b). **Remarks:** Marsh and limestone caves. This village was previously known as Munggu Babi (meaning “Cold Hill”) and spelled Mungo Babi by Banks (1935b). At the time of Banks’ investigation, the village shared its swiftlet nests collected from Gn. Nambi with Kg. Bukar and Kg. Bharu.

**Kampung Tambirat:** 1.5445 110.5326 SL. **References:** Bakewell et al. (2017).

**Kampung Tanjung Bowang:** 1.5065 110.4800 5 m. **References:** Mansor and Gawin (2020a,b).

**Kampung Tapuh, Sungai Kedup** (=Sungai Kidup): 0.9333 110.5833 35 m. **Museums:** DMNH, SMK, YPM. **Collectors:** George, T. Harrisson, R. Nyandoh, L. Labang, Charles. **References:** Harrisson (1950a), BirdLife International (2001), Gawin (2014).

**Kampung Tarat:** 1.208 110.53 20 m. **References:** Smythies (1957a). **Remarks:** Regarding White-browed Crake.

**Kampung Tebakang** (=Tabekang, Tebekang): 1.1000 110.5167 5 m. **Museums:** SMK, YPM. **Collectors:** R.W.C. Shelford, J. Waterstradt. **References:** Bampfylde, C.W. Beebe, B.E. Smythies. **Museums:** AMNH, SMK, YPM. **Collectors:** A.R. Morrison. **References:** Smythies (1950), Anon (1958), Deignan (1957), Lim et al. (2014), Sheldon et al. (2019).

**Kapit** (=Fort Kapit, Fort Sylvia, Kuala Kapit): 2.0160 112.9300 20 m. **Museums:** AMNH, SMK, YPM. **Collectors:** C.A. Bampfylde, C.W. Beebe, B.E. Smythies. **References:** Moulton (1914a), Smythies (1957a).

**Kelingkang Range** (=Klingkang, Kalingkang, Keling Kang): 0.99 111.53 200 m. **Museums:** SMK. **References:** Moulton (1914a), Sheldon (1987).

**Kenyalang Park-Spring Complex, Kuching:** 1.5350 110.3550 20 m. **References:** MNS-BCC (2001c), Razak et al. (2019).

**Keresa Plantations Oil Palm Plantation:** 3.1519 113.5632 30 m. **References:** Gervais et al. (2012).

**Kubit, Lawas** (=Koobos, Kooboo, Kubu near Lawas, “Lawas, Kubu”): 4.05 115.41 5 m. **Museums:** AMNH. **Collectors:** T. Harrisson. **References:** Morrison (1950). **Remarks:** The latitude and longitude here are for Lawas, since a kubit (fortress) would likely be at the town.

**Kota Samarahan, Overview** (=Muara Tuang, Maratuan, Kota Semarahan, UNIMAS and, at UNIMAS, the Asset Unit, Bunga Raya College, Dahlia College, Desa Ilmu): 1.4600 110.4800 5 m. **Museums:** LSU, RMC, UNIMAS, YPM. **Collectors:** Gaining, Padan. **References:** Gregory-Smith (1995, 1996, 1999), Bakar (1999), Tuen and Darub (1999), Tuen (2004), Ahmad (2006), Rahman and Tuen (2006), Ghani (2008), Mohd Aris (2009), Lim (2010), Abdillah (2011), Lim et al. (2011, 2014), Lim and
Kuala Belepeh (=Baloi Peh): 2.7500 114.0667 100 m. **References:** Hose and McDougall (1912:14). **Remarks:** Hose and McDougall have a photo of a “gorge in the Rejang River above the entrance of Baloi Peh.”

Kuala Bena: 2.0040 113.1010 24 m. **References:** Wong et al. (2022). **Remarks:** Mostly a camera-trap study of mammals in an Acacia plantation but includes Great Argus and Crested Fireback.

Kuala Bukau (=Long Bukau): 2.3083 113.8750 160 m. **References:** Hose and McDougall (1912). **Remarks:** Hose and McDougall (1912:138) have a photo of the “Falls at Long Bukau.”

Kuala Buntal: 1.6940 112.0174 SL. **References:** Bakewell et al. (2017).


Kuala Gaya: 2.8310 111.6390 SL. **References:** Edwards et al. (1986a,b), Edwards and Polshek (1987), Bakewell et al. (2017), Wei et al. (2009).

Kuala Jungle Baru: 2.8950 112.0174 SL. **References:** Bakewell et al. (2017).

Kuala Judan: 2.9010 112.0460 SL. **References:** Bakewell et al. (2017).

Kuala Kabong (=Kuala Krian): 1.7880 111.1050 SL. **References:** Edwards et al. (1986a,b), Edwards and Polshek (1987), Bakewell et al. (2017), Wei et al. (2009), Bakewell et al. (2017).

Kuala Kabulu (=Kabulo): 3.21 113.75 25 m. **Collectors:** A.H. Everett. **References:** Sharpe (1877b). **Remarks:** This site must be near the coast.

Kuala Kemena: 3.1800 113.0320 SL. **References:** Bakewell et al. (2017).

Kuala Kupur: **References:** Wei et al. (2009). **Remarks:** This site must be near the coast.
Kuala Labang: 3.2500 113.4833 15 m. **Collectors:** A.H. Everett. **References:** Sharpe (1877).

**Kuala Lawas:** 4.9720 115.4150 SL. **References:** Howes and NPWO (1986b), Caldecott (1987), Howes (1987), Sim et al. (2006), Yeap et al. (2007), Bakewell et al. (2017). **Remarks:** This is part of the Brunei Bay IBA.

**Kuala Liang, Middle Baram Caves:** 3.5958 114.4291 20 m. **References:** Lim and Wan (2021). **Remarks:** An important swiftlet cave area, located near Sg. Kejin and Sg. Tugang on the east side of Sg. Baram.

**Kuala Likau:** 3.4390 113.1570 SL. **References:** Bakewell et al. (2017). **Remarks:** Long sandy beach, rugged rocky coastline.


**Kuala Madihit** (=Kuala Kayan): 1.7000 109.9360 SL. **Remarks:** Sg. Lundu is also called Sg. Kayan (or Batang Kayan), not to be confused with Sg. Kayan of the upper Sg. Sadong.

**Kuala Maladum:** 1.6646 111.0238 SL. **References:** Bakewell et al. (2017).

**Kuala Malinau** (=Long Melinau): 3.9800 115.6900 200 m. **References:** SMK. **Remarks:** Kuala Malinau is where Sg. Melinau, which runs past the park HQ, meets Sg. Melinau Paku. This junction is downstream from the park HQ, near the Marriott Resort. Together they form the Melinau Paku, which runs into Sg. Tutoh. Some researchers may have confused Kuala Melinau with Kuala Melinau Paku (see next site). The Sg. Melinau in this entry should not be confused with the Sg. Melinau in the Mijing-Baleh drainage.

**Kuala Melinau Paku, Gunung Mulu National Park** (=Long Melinau Paku): 2.0958 113.6750 25 m. **Museums:** SMK. **Collectors:** T. Harrisson. **References:** Harrisson (1952a), Fogden (1965b). **Remarks:** This is where Sg. Melinau Paku meets Sg. Tutoh. Judging from Fogden’s itinerary, he may have meant Long Melinau Paku rather than Long Melinau (same with Harrisson).

**Kuala Merit** (=Nanga Merit): 2.2850 113.1850 37 m. **References:** Bilung et al. (2014), Pang et al. (2017a). **Remarks:** Sg. Merit is a tributary of Sg. Rajang upstream from Pelagus National Park.

**Kuala Moyan:** 1.5970 110.5860 SL. **References:** Gregory-Smith (1999).

**Kuala Mujong** (=Kuala Mujan, Long Mujan, Menjan, Miyong): 2.0220 113.1750 40 m. **Museums:** AMNH, MCZ, RMC. **Collectors:** J.C. Moulton, Gani, C.W. Beebe, F. Shaw Meyer. **References:** Beebe (1918-22), Long and Collar (2002).

**Kuala Mukah:** 2.9130 112.0960 SL. **References:** Bakewell et al. (2017).

**Kuala Niah** (=Kuala Niah, Niah National Park): Museums: SMK. **Collectors:** T. Harrisson. **References:** Harrisson (1961).

**Kuala Lundu** (=Kuala Kayan): 1.7000 109.9360 SL. **Museums:** RMC. **Collectors:** T. Harrisson. **Remarks:** Sg. Lundu is also called Sg. Kayan (or Batang Kayan), not to be confused with Sg. Kayan of the upper Sg. Sadong.

**Kuala Lupar:** 1.5200 110.9700 SL. **References:** Edwards et al. (1986a,b), Edwards and Polshek (1987). **Remarks:** Part of the Sadong-Saribas coast IBA.

**Kuala Madihit:** 4.1800 115.1400 140 m. **Museums:** SMK. **Collectors:** J.C. Moulton. **References:** Moulton (1912), Harrisson (1963a).

**Kuala Magoh** (=Long Mago): 3.9800 115.6900 200 m. **Museums:** SMK. **Collectors:** J.C. Moulton. **References:** Moulton (1912). **Remarks:** Here, Sg. Seridan joins the Magoh and takes its name.

**Kuala Maludam:** 1.6646 111.0238 SL. **References:** Bakewell et al. (2017).

**Kuala Matu:** 2.7126 111.7352 SL. **Museums:** SMK. **References:** Sharpe (1876), Edwards and Polshek (1987), Mizutani et al. (2006a, 2007), Bakewell et al. (2017).

**Kuala Medamit** (=Madamit): 4.4750 114.9228 15 m. **Museums:** SMK. **Collectors:** J.C. Moulton. **References:** Moulton (1912).

**Kuala Melinau, Gunung Mulu National Park** (=Long Melinau, Malinau): 4.028 114.803 30 m. **Museums:** YPM. **Collectors:** Kemp and Kemp (1976), Duckett (1985). **Remarks:** Kuala Melinau is where Sg. Melinau, which runs through the park HQ, meets Sg. Melinau Paku. This junction is downstream from the park HQ, near the Marriott Resort. Together they form the Melinau Paku, which runs into Sg. Tutoh. Some researchers may have confused Kuala Melinau with Kuala Melinau Paku (see next site). The Sg. Melinau in this entry should not be confused with the Sg. Melinau in the Mijing-Baleh drainage.

**Kuala Merit** (=Nanga Merit): 2.2850 113.1850 37 m. **References:** Bilung et al. (2014), Pang et al. (2017a). **Remarks:** Sg. Merit is a tributary of Sg. Rajang upstream from Pelagus National Park.

**Kuala Moyan:** 1.5970 110.5860 SL. **References:** Gregory-Smith (1999).

**Kuala Mujong** (=Kuala Mujan, Long Mujan, Menjan, Miyong): 2.0220 113.1750 40 m. **Museums:** AMNH, MCZ, RMC. **Collectors:** J.C. Moulton, Gani, C.W. Beebe, F. Shaw Meyer. **References:** Beebe (1918-22), Long and Collar (2002).

**Kuala Mukah:** 2.9130 112.0960 SL. **References:** Bakewell et al. (2017).

**Kuala Niah:** 3.9690 113.7060 SL. **References:** Edwards et al. (1986a), Edwards and Polshek (1987), Mizutani et al. (2006a, 2007), Bakewell et al. (2017).

**Kuala Nyalau:** 3.6420 113.3820 SL. **References:** Bakewell et al. (2017). **Remarks:** Sandy beach.

**Kuala Oya:** 2.8740 111.8810 SL. **Museums:** RMC. **References:** Voous (1950b), Morioka and Yang (1996), Bakewell et al. (2017).

**Kuala Padungan, Kuching** (=Pedungan): 1.5580 110.3590 3 m. **References:** Low (1848).

**Kuala Pandan:** 3.1500 115.3710 5 m. **Collectors:** A.H. Everett. **References:** Sharpe (1877b).

**Kuala Pasir:** 2.8740 111.8810 SL. **Museums:** RMC. **References:** Voous (1950b), Morioka and Yang (1996), Bakewell et al. (2017).

Kuala Penat: 2.8870 111.9790 SL. References: Bakewell et al. (2017).


Kuala Salindong (=Salindong, Sulindong): 4.31 115.04 75 m. Museums: SMK. Collectors: J.C. Moulton. References: Moulton (1912). This site is shown on Moulton’s map as a tributary of Sg. Limbang. He stopped here on his way to Batu Lawi, and some of his collectors spent 5 days collecting here on the return trip.


Kuala Samunsam (=Salindong, Sulindong): 4.31 115.04 75 m. Museums: SMK. Collectors: J.C. Moulton. References: Moulton (1912). Remarks: This site is shown on Moulton’s map as a tributary of Sg. Limbang. He stopped here on his way to Batu Lawi, and some of his collectors spent 5 days collecting here on the return trip.


Kuala Tekoyang (=Takoyong, Takogong): 1.7173 110.3226


**Kuala Trusan** (=Sungai Trusan): 4.977 115.182 SL. References: Harrisson (1963a), Howes and NPWO (1986b), Caldecott (1987), Yeap et al. (2007), Bakewell et al. (2017). Remarks: This entry covers Sg. Trusan delta and is part of the Brunei Bay IBA.


**Kuala Tugang, Middle Baram Caves**: 3.69 114.45 30 m. Remarks: Sg. Tugang enters Sg. Kejin here. It is important as an access river to Lobang Beruang and Lobang Tuking.

**Kubaan-Puak Forest Management Unit** (=Kubaan-Puak Corridor Project, Borlin Forest Management Unit): References: Ahmad et al. (2017). Remarks: This FMU is part of an effort by the WWF “Heart of Borneo” project to develop sustainably managed (certified) forest units connecting Gn. Mulu, Pulong Tau, and Gunung Buda national parks.


Gaun.

**Kuching-Penrissen Road Mile 13** (=Batu 13): 1.40 110.325 30 m. **Museums**: YPM.

**Kuching-Penrissen Road Mile 17**: 1.33 110.3 50 m. **Museums**: YPM. **Collectors**: Junaidi.

**Kuching-Penrissen Road Mile 20**: 1.3 110.28 30 m. **Museums**: YPM. **Collectors**: Junaidi.

**Kuching-Penrissen Road Mile 24**: 1.25 110.28 m. **Museums**: YPM. **Collectors**: Junaidi.

**Kuching-Samarahan Bridge**: 1.499 110.396 5 m. **References**: MNS-BCC (2000b).

**Kuching-Serian and Muara Tuang Road Junction** (=Kuching-Serian and Kota Samarahan Road Junction, near Padawan): 1.4470 110.3640 10 m. **Museums**: SMK. **References**: McCormick (1976).


**Kuching-Serian Road Mile 18**: 1.336 110.407 10 m. **References**: Medway (1970).

**Kuching-Serian Road Mile 21** (=Beratok): 1.314 110.407 15 m. **References**:arrison (1951b).


**Kuching Waterfront**: 1.5583 110.3983 5 m. **References**: Razak et al. (2019).


**Lambir Hills National Park Highway Pass**: 4.2360 114.0600 100 m. **Museums**: LSU. **References**: Lim and Sheldon (2011), Lim et al. (2017), Sheldon et al. (2019).


**Lanchang** (=Gua Lanchang): 1.1570 110.4920 35 m. **References**: Williams (1914), Banks (1935b), Medway (1958a). **Remarks**: A swiftlet nesting site situated in Gn. Nambi. Pelaman Lanchang is an offshoot of Lanchang.


**Lavang**: 3.29 113.48 20 m. **References**: Samejima and Hon (2020). **Remarks**: Secondary forest.


**Lepo’ Bunga** (=Lepo Bunga): 3.9425 115.5444 1740 m. **References**: Orenstein et al. (2010), MNS-BCC (2011a), Sreedharan (2014). **Remarks**: This is a Sreedharan bird ringing site on the Murud summit trail.

**Lepar Zinc**: 3.4844 115.4789 950 m. **References**: Sreedharan (2014).

**Leppu Aga House, Baram** (=Leppu Aga, Umar): **Museums**: RMC. **Collectors**: J.C. Moulton, Gani. **References**: Gawin.
Remarks: Lepo Aga is a Dayak minority group in the Miri region of Sarawak. Lepo means tribe.

**Limbang** (=Limbang, Pangkalan Terap): 4.75 115.00 5 m. **Museums:** ANSP, SMK, MCZ, ROM. **Collectors:** A.H. Everett, J.C. Moulton. **References:** Moulton (1912, 1914a), Ripley (1942), Harrisson (1963a), Gawin (2014). **Remarks:** These references probably refer mainly to Sg. Limbang rather than Limbang itself, although Moulton (1912) specified collecting near the town.

**Limbang Airport:** 4.8090 115.0080 15 m. **References:** Bakewell et al. (2017).


**Lingga:** 1.3500 111.1667 10 m. **Museums:** MCSNG, USNM, YPM. **Collectors:** O. Beccari, D.C. Worcester, F.S. Bourns. **References:** Everett (1889), Beccari (1904), Blaber and Milton (1994), Gregory-Smith (1996, 1997b). **Remarks:** Blaber and Milton (1994) surveyed Black-and-red Broadbill nests while traveling along Sg. Seterap and Sg. Lingga between Lingga and Pantu.


**Lio Jongo:** 1.55 111.5625 50 m. **Museums:** MNS, NHMUK, RMC. **Collectors:** T. Harrisson. **References:** Harrisson (1961).

**Lobang:** 4.2300 114.2800 5 m. **References:** Scott (1989). **Remarks:** This may be a small swiftlet cave on Gn. Serumbu, near Rajah James Brooke’s bungalow.

**Lobang Beruang, Middle Baram Caves** (=Bruang): 3.694722 114.4603 150 m. **Museums:** RMC. **References:** Banks (1935b:307, 1949a), Medway (1957). **Remarks:** A white-nest swiftlet cave c. one hour by outboard up Sg. Kejin above Long Laput and near Lobang Tuiking.

**Lobang Beruang, Middle Jeragan, Niah National Park:** **Museums:** SMK. **Collectors:** T. Harrisson. **References:** Harrisson (1961).

**Lobang Sepeyang, Middle Baram Caves:** **References:** Banks (1935b:307, 1949a). **Remarks:** A white-nest swiftlet cave opposite Long Laput across Sg. Baram between Claudetown (Marudi) and Kuala Tinjar. The course of Sg. Baram seems to have changed since Hose’s time (or his maps are inaccurate), and we could not locate the lake on Google Earth. So, the coordinates here are an approximation.

**Lobang Salai, Middle Baram Caves** (=Salai Cave): 3.6514 114.4158 70 m. **Museums:** SMK, NHMUK. **References:** St. John (1862), Banks (1935b), Medway (1958b), Cranbrook (1984), Goh et al. (2018), Lim (1999), Cranbrook and Lim (1999), Lim and Cranbrook (2002, 2014), Lim and Rahman (2005), Cranbrook et al. (2013), Lim and Wan (2021). **Remarks:** The coordinates here are from Lim and Wan (2021). Banks (1935b) puts this cave in a different place -- near Long Laput.

**Lobang Tuking, Middle Baram Caves** (=Tocking): 3.692778 114.4672 220 m. **References:** Banks (1935b). **Remarks:** A large white-nest swiftlet cave with an underground river, Sg. Tuking (C.K. Lim, pers. comm.). Banks appears to have provided incorrect directions to this cave.

**Lobang Tongog, Middle Baram Caves:** References: Banks (1935b:307, 1949a). **Remarks:** A white-nest swiftlet cave opposite Long Laput across Sg. Baram (C.K. Lim, pers. comm.). Banks called this cave “Toking.”

**Loba Slesong:** 1.5990 110.4000 5 m. **References:** Fogden (1965b), Mizutani et al. (2006a, 2007).

**Long Akah** (=Akar, Aka, Ayap): 3.3187 114.7870 80 m.
<table>
<thead>
<tr>
<th>Location</th>
<th>Coordinates</th>
<th>Elevation</th>
<th>Museum</th>
<th>Collectors</th>
<th>References</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Aya (=Aiah, Ayab)</td>
<td>3.4164 114.1389</td>
<td>20 m.</td>
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<tr>
<td>Long Kubaan</td>
<td>3.7375 115.1917</td>
<td>350 m.</td>
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<tr>
<td>Long Labid</td>
<td>3.5500 115.2625</td>
<td>900 m.</td>
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<tr>
<td>Long Bawan (=Long Banyok)</td>
<td>3.8490 115.4400</td>
<td>25 m.</td>
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<tr>
<td>Long Banio (=Long Banyok)</td>
<td>3.2550 115.3990</td>
<td>442 m.</td>
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<tr>
<td>Long Bawang (=Longbawan, Balawit, Balawit Tableland)</td>
<td>3.90 115.60 950 m.</td>
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<tr>
<td>Long Bemang</td>
<td>3.8500 114.6000</td>
<td>25 m.</td>
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<tr>
<td>Long Buroi</td>
<td>3.1681 114.4894</td>
<td>95 m.</td>
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<tr>
<td>Long Buya, Sungai Pleiran</td>
<td>2.66 114.70 700 m.</td>
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<tr>
<td>Long Buyo, Upper Trusan (=Long Bewyu)</td>
<td>915 m.</td>
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<tr>
<td>Long Dapoi</td>
<td>3.2270 114.4530</td>
<td>74 m.</td>
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<tr>
<td>Long Ekang (=Ikkang, Loagan Ikang)</td>
<td>3.9183 114.4500</td>
<td>20 m.</td>
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<tr>
<td>Long Kachu</td>
<td>4.7423 115.2844</td>
<td>20 m.</td>
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<tr>
<td>Long Kejin (=Kejun, Keping)</td>
<td>3.7000 114.4400</td>
<td>25 m.</td>
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<tr>
<td>Long Lamai</td>
<td>3.1375 115.3958</td>
<td>437-1200 m.</td>
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<tr>
<td>Long Laput, Middle Baram Caves</td>
<td>3.7347 114.4278</td>
<td>40 m.</td>
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<tr>
<td>Long Leelang (=Lelang)</td>
<td>3.4200 115.1500</td>
<td>475 m.</td>
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<tr>
<td>Long Lellah</td>
<td>3.4200 115.1500</td>
<td>475 m.</td>
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</tbody>
</table>


Long Luar (=Luan): 2.6833 114.5167 500 m. **Museums:** NHMUK, SMK. **References:** Harrisson (1965b), Gawin (2014). **Remarks:** Sg. Danum joins joins Sg. Plieran below Long Luar, south of the Usun Apau Plateau.

Long Magoh (=Mago): 3.8800 114.9800 135 m. **Collectors:** J.C. Moulton. **References:** Moulton (1912).

Long Main: 3.4100 115.1800 500 m. **References:** Chin (2000, 2002). **Remarks:** A Penan village serving as a center for Chin’s study of bird and mammal hunting. Chin’s campsite was at 3.43, 115.18 on flat ground near the Sg. Sebelo.

Long Marigau: **Museums:** ROM, SMK. **Collectors:** Achi. **Remarks:** Placed at 2.658043 112.9482 by ROM.

Long Mendalam (=Kuala Mendalam, Madalam, Medalam, Madalun): 4.3870 114.9010 30 m. **Museums:** ANSP, MCZ, ROM, SMK, YPM. **Collectors:** C. Hose, J.C. Moulton, T. Harrisson, D. Sigar. **References:** Moulton (1912), Harrisson (1952a).

Long Mir (=Long Mari): 3.5850 114.4325 50 m. **References:** Hose (1893a).

Long Main: 3.4100 115.1800 500 m. **References:** Chin (2000, 2002). **Remarks:** A Penan village serving as a center for Chin’s study of bird and mammal hunting. Chin’s campsite was at 3.43, 115.18 on flat ground near the Sg. Sebelo.

Long Marigau: **Museums:** ROM, SMK. **Collectors:** Achi. **Remarks:** Placed at 2.658043 112.9482 by ROM.

Long Mendalam (=Kuala Mendalam, Madalam, Medalam, Madalun): 4.3870 114.9010 30 m. **Museums:** ANSP, MCZ, ROM, SMK, YPM. **Collectors:** C. Hose, J.C. Moulton, T. Harrisson, D. Sigar. **References:** Moulton (1912), Harrisson (1952a).

Long Mirti (=Long Mari): 3.5850 114.4325 50 m. **References:** Hose (1893a).

Long Musan, Baram: **Museums:** RMC. **References:** Rheindt et al. (2022).

Long Nibong (=Nibung): 3.2100 114.4090 60 m. **Museums:** NHMUK, SMK. **Collectors:** Oxford University 1932. **References:** Harrisson (1932), Gawin (2014).


Long Patah (=Patah, Katih): 3.3500 114.6000 75 m. **Museums:** AMNH, RMC, SMK, YPM. **Collectors:** T. Harrisson, A. Anyi. **References:** Hose and McDougall (1912), Smythies (1957a), Gawin (2014).

Long Pawan (=Pongga Pawan?): 3.3300 114.6500 70 m. **Museums:** AMNH. **Collectors:** T. Harrisson.


Long Pembarang (=Pembaeong, Pembooang): **Museums:** RMC. **Collectors:** C. Chunggat.

Long Pulai, Sungai Baram: **Museums:** RMC. **Collectors:** J.C. Moulton.

Long Sabai: 3.4700 115.2400 700 m. **References:** Chin (2000, 2002), Sreedharan (2014). **Remarks:** A Penan village serving as the center for Chin’s study of bird and mammal hunting. Chin’s campsite was at 3.49 115.25.

Long Salai: 3.665 114.421 20 m. **References:** Hose (1893a). **Remarks:** Hose (1893a:382) plotted it on a map and noted that the Sg. Baram rapids commence here.

Long San: 3.293 114.779 85 m. **Museums:** YPM. **Collectors:** Nawan. **References:** Pang et al. (2018), Mohd-Azlan et al. (2022). **Remarks:** Logged secondary forest near human settlement.

Long Selaan, Sungai Baram (=Salaan, Selam): 3.092 115.082 200 m. **References:** Hose (1893a).

Long Semado (=Semadoh): 4.2458 115.5875 850 m. **Museums:** AMNH. **Collectors:** T. Harrisson. **References:** Amadon and Harrisson (1956), Harrisson (1963a).

Long Seridan (=Serin): 3.9800 115.6900 200 m. **Museums:** SMK. **Collectors:** J.C. Moulton. **References:** Moulton (1912). **Remarks:** This site is in the valley to the east of Mulu. Moulton returned via Sg. Seridan after ascending Batu Lawi.

Long Sikarok (=Sikarak): 1.1167 111.8667 80 m. **Museums:** AMNH, SMK, YPM. **Collectors:** T. Harrisson, D. Sigar.

Long Silat: 2.9740 114.9230 170 m. **References:** Hose (1927), Hose and McDougall (1912). **Remarks:** Hose and McDougall (1912:276, 286) noted that Sg. Silat is the uppermost large tributary of the Baram and referred to it as “descending from the Usun Apo to join the Baram,” as “the High Road between East and West Borneo.”


Long Takun, Miri: **Museums:** RMC. **Collectors:** J.C. Moulton.

Long Terawan (=Terawan Tutok, Barana Tarawa, Tarawa): 3.9750 114.6417 15 m. **Museums:** DMNH, SMK, YPM. **Collectors:** Padan, Puding, T. Harrisson, Belawa. **References:** Fogden (1965b). **Remarks:** A site on Sg. Tutoh.

Long Tikan: 2.85 114.8833 200 m. **References:** Kemp and...
Kemp (1976).

**Long Tinjar** (=Kuala Tinjar, Tingjir, Tenjar): 4.0370 114.3160 5 m. **References:** Hose (1893a).

**Long Tinkalat:** Museums: SMK. **References:** Sheldon (1985).

**Long Tuma:** 4.8039 115.4094 10 m. **Museums:** LSU. **References:** Lim et al. (2014), Sheldon et al. (2019).

**Long Tutoh** (=Tutuh, Kuala Tutoh): 4.0167 114.4100 20 m. **Remarks:** This is an important junction for river travel from Sg. Baram to Gn. Mulu.

**Long Ulang, Kelabit Plateau:** Museums: AMNH. **Collectors:** T. Harrisson.

**Luak Bay:** 4.3445 113.9715 SL. **References:** Bakewell et al. (2017).

**Lubang Baya Field Station, Batang Ai National Park:** 1.3034 112.0708 200 m. **Museums:** USNM.

**Lubok Antu:** 3.8875 113.7375 65 m. **Museums:** SMK. **References:** Smythies (1957a), MNS-BCC (2000a), Gawin (2014).

**Lubok Trong, Kelabit Plateau:** Museums: AMNH. **Collectors:** T. Harrisson.

**Lurudie:** Museums: MNS, SMK. **Remarks:** Specimens collected in 1924.

**Lusut:** 4.3322 113.9678 SL. **References:** Bakewell et al. (2017).

**Lutong:** 4.4579 113.9989 SL. **References:** Fogden (1965b), Duckett (1985), Wei et al. (2009), Bakewell et al. (2017), Ramji et al. (2022a).

**Maludam Coast:** 1.7008-1.538 110.817-111.000 SL. **References:** Bakewell et al. (2017). **Remarks:** Extensive mud and sand flats.


**Mamp:** **Collectors:** A.H. Everett. **References:** Everett (1889).

**Marudi** (=Claudetown, Baram Station): 4.1833 114.3167 20 m. **Museums:** ANSP, ROM, SMK, USNM, UWB. **Collectors:** A.H. Everett, C. and E. Hose, T. Harrisson, L.K. Wang. **References:** Sharpe (1892b), Hose (1893a), Hose and McDougall (1912), Williams (1914), Strememann (1937), Harrison (1968), Duckett (1985), Witt and Sheldon (1994a). **Remarks:** This town was Charles Hose’s headquarters for much of his time in Sarawak.

**Marup** (=Marap, Marop, Marup Baroh): 1.1333 111.6500 20 m. **Museums:** MCSNG, NHMUK, SMK. **Collectors:** O. Beccari, A.H. Everett. **References:** Walden (1872), Sharpe (1877a,b), Crocker (1881), Everett (1889), Beccari (1904), Moulton (1914a), Witt and Sheldon (1994a), Gawin (2014). **Remarks:** According to Sharpe (1877a:2), “Marup lies at the base of the Balang and Tiang Laju mountains....

**Marun, Sungai Baram:** Museums: AMNH. **Collectors:** T. Harrisson.

**Matang Road, Overview** (=Rubber Road, Rubber Tree Road, Lundu Road, Matang Highway; includes Metro City nowadays): **Museums:** MCSNG, SMK, RMC, ROM, UF, YPM. **Collectors:** O. Beccari and G. Doria, A.H. Everett, Bartlett, J. Bangga, Junaidi, L. Labang, A. Anyi, J. Gaun, Gaing, Sliman, Puding, Dioscoro S. Rabor, Padan, E. Ferdinand. **References:** Walden (1872), Sharpe (1877b, 1893a:part VII), Everett (1889), Bartlett (1896b), Beccari (1904), Moulton (1914a), Banks (1935b), Harrisson (1951b), Banks (1935b), Harrisson (1951b), Sheldon (1987), Long and Collar (2002), MNS-BCC (2000c, 2012c), Yeap (2002a), Chan (2005), Jeyarajasingam (2013), Gawin (2014). **Remarks:** This is the road from Kuching to Kubah National Park and ultimately Lundu. Many Loke/Harrisson specimens came from here. Miles on this road (and others) were delimited with stone markers, called “batu,” hence “batu” and “mile” were used interchangeably to indicate locations on the road.

**Matang Road Mile 2:** 1.549 110.308 5 m. **Museums:** SMK, YPM.

**Matang Road Mile 3:** 1.560 110.297 5 m. **Museums:** SMK, YPM.

**Matang Road Mile 4:** 1.573 110.228 10 m. **Museums:** SMK, YPM.

**Matang Road Mile 5:** 1.572 110.272 10 m. **Museums:** SMK, YPM.

**Matang Road Mile 10** (=Batu 10): 1.592 11.226 10 m. **Museums:** SMK, YPM.

**Matang Road Mile 12:** 1.611 110.211 5 m. **Museums:** SMK, YPM. **References:** Gawin (2014).
Matang Road Mile 16: 1.649 110.181 20 m. **Museums:** SMK, YPM.

Matang Wildlife Centre (=Matang Wildlife Sanctuary): 1.6090 110.1600 25 m. **References:** Rahman (2000), Sodhi (2002a), Paperna et al. (2008), Cheung (2010), Rahman et al. (2010). **Remarks:** The Centre comprises 180 ha of mixed lowland dipterocarp forest.

Matu-Daro and Sibu Swamp Forest (includes Daro Forest Reserve): 2.23-2.85 111.40-111.87 SL. **References:** Scott (1989). **Remarks:** A large area of peat swamp forest and mangrove in the Rajang delta.

Mebugu (probably =Melugu): **Museums:** YPM. **Collectors:** R. Nangang. **Remarks:** Mebugu is 1.120 111.423 25 m.

Middle Baram Caves, **Overview:** **References:** Banks (1935b:307, 1949a, 1950), Medway (1957, 1958b, 1966), Cranbrook (1984), Goh et al. (2018), Lim (1999), Cranbrook and Lim (1999), Lim and Cranbrook (2002, 2014), Lim and Rahman (2005), Cranbrook et al. (2013), Lim and Wan (2021). **Remarks:** A cave region along Sg. Baram, where swiftlets produce white nests. In addition to the Middle Baram Caves listed in the gazetteer are many lesser-known caves (C.K. Lim, pers. comm.).

Midway Link, Kuching: 1.4860 110.4080 10 m. **References:** Hong and Mohd-Azlan (2018). **Remarks:** Near to secondary forest.


Miri-Bintulu Road: 4.2412 114.0664 65 m. **Museums:** LSU. **References:** Sheldon et al. (2019).

Miri-Bintulu Road: 4.1576 114.0337 25 m. **Museums:** LSU. **References:** Lim et al. (2014), Sheldon et al. (2019).
112.2760 100 m. **Museums**: LSU. **References**: Grubh (2000), Tuen (2006), Sheldon et al. (2019). **Remarks**: Primary and riverine forest.

**Nanga Delok**: 3.6417 115.4569 100 m. **References**: Gawin (2014).

**Nanga Dua, Ulu Sebuyau National Park**: 1.4062 110.9744 10 m. **References**: Wound and Sim (2017).


**Nanga Peraran, Pelagus National Park Area**: 2.193 113.118 40 m. **References**: Pang et al. (2018), Mohd-Azlan et al. (2022).

**Nanga Segerak Research Station, Lanjak-Entimau Wildlife Sanctuary**: 1.4133 112.0044 350-450 m.

**Natad Tuan** (=Natad, Tuan): **Museums**: AMNH, YPM. **Collectors**: T. Harrisson, D. Sigar, Ulan Kasil. **Remarks**: This is an Ulu Trusan site near Long Kerabangan (4.19 115.55 700 m) and Long Belau (4.2 115.58 700 m). It is a prayer mountain of the Borneo Evangelical Church or SIB (Sidang Injil Borneo). The name apparently means resting place of a notable person (Wikipedia).


**Niah-Suai Forest Reserve** (=Suai Forest Reserve): 3.8333 113.60 15 m. **References**: Duckett (1987).

**North of Kampung Limpaku Pinang**: 4.8996 115.0294 SL. **References**: Bakewell et al. (2017).


**Old Mukah Airport Beach**: 2.9090 112.0790 SL. **References**: Bakewell et al. (2017).

**Old Sibu Airport**: 2.3400 111.8400 10 m. **References**: Edwards and Polshek (1987).


**Padawan** (=Kuching-Penrissen Road Mile 10, Kota Padawan, Batu 10): 1.425 110.3208 20 m. **Museums**: AMNH, RMC, SMK, YPM. **Collectors**: Uluk, C.W. Beebe, L. Labang, E. Bartlett. **References**: Bartlett (1896a, b:113), Moulton (1914a), Harrisson (1950a), Gawin (2014).

**Pa D’it**: 3.4833 115.6 1362 m. **References**: Leh (2004), Sreedharan (2014).

Pagalayan: 4.4500 114.2700 5 m. References: Hose (1893a).


Pasin Forestry Management Unit (=Pasin FMU): 1.7500 112.7500 100-400 m. References: Wong et al. (2022). Remarks: Wong conducted a camera-trap study of mammals in an Acacia plantation, but also recorded Great Argus and Crested Fireback.


Remarks: Pa Trap is now known as Pa Lungan. Mjöberg (1925) includes a sketch map showing its position.


2012a), Ramji and Rahman (2011), Bakewell (2013), Sim (2013), Schjølberg (2016), Rosli et al. (2023). **Remarks:** Harrisson (1955b:665) noted that in the Murut dialect of the upper Trusan, Paya Maga means “red (reddish) wet place”, and “paya” describes poorly drained soils on plateaus and hill tops. He went on to say that Paya Maga refers (as a description, not a place name) to the southern limit of the Crocker Range, which rises along the border between Sarawak and Sabah and separates the Sg. Trusan (Sarawak) and Sg. Padas (Sabah) drainages. This essentially describes the Maligan Range of Sabah (Sheldon 2015). In 1939, Banks (1952) visited what he (and later, Mees 1955) called the Maga Mountains at (an estimated) 4.33 115.83. But, if these coordinates are correct, Banks was too far south and east. Nevertheless, his team collected an interesting form of Mountain Blackeye on that trip. See Pa Brayong.

**Paya Megok:** 1.20 110.50 20 m. **Museums:** SMK. **References:** Anon (1955, 1958), Medway (1970). **Remarks:** A Chinese settlement for rice cultivation set up by the Sarawak government in the mid-1950s from mile 13-32 on the Kuching-Serian road in the vicinity of Tarat.


**Pelandok, Paku** (=Peladok, Palandok, Pelangkog, Pelandok l., Pulau Pelandok, Pelanduk, Sungai Pelandok): 1.5125 111.5125 30 m. **Museums:** NHMUK, NMS, RMC. **Collectors:** C.B. Kloss, H.C. Robinson, F. Adelborg. **References:** Gawin (2014). **Remarks:** See Ulu Paku.

**Pending Road** (Pending Marsh): 1.5500 110.3480 50 m. **Museums:** YPM, SMK, RMC. **Collectors:** G. Sureng, J. Gaun, C.S. Yu **References:** Moultion (1914a), Smythies (1960), Fogden (1965b,c, 1966b), Harrisson (1967), Croxall (1969), Chin (1968). **Remarks:** Birds were ringed here from 1966-1968 by the SMK (McClure and Leelavit 1972:340-342). Chin (1968) reported some ring recoveries.

**Peninjau** (=Gunung Peninjau, Peninyau, Pininjau): 1.4300 110.2240 260 m. **Museums:** MCSNG. **Collectors:** O. Beccari. **References:** St. John (1862), Wallace (1869), Beccari (1904). **Remarks:** Peninjau was the name of Rajah Brooke's holiday cottage. See Gn. Serumbu.

**Penom** (=Penum): 1.4911 111.5433 50. **Museums:** YPM, SMK. **Collectors:** M. Umhpang, T. Harrisson, Tayun.

**Pekaka Estate** (=Peraka, Pekaka Palm Oil Sime Darby Blvd): 3.468 113.656 30 m. **References:** Smythies (1999), Mann (2008). **Remarks:** Barn Owls were introduced here.

**Permai Rainforest Resort:** 1.7540 110.3170 5 M. **References:** Aziz and Laman (2020).

**Piasau Nature Reserve:** 4.4350 114.0010 SL. **References:** Yeap (2002a), Ali and Tisen (2017), Musbah (2017), Jenang and Laman (2018), Laman and Jenang (2020), Ramji et al. (2022a). **Remarks:** This nature reserve of 88.5 ha was set up to protect Oriental Pied Hornbills.

**Pig Lane** (=Parkland, Lorong Park, Park Lane, Segu Bungalow, Banglo Segu): 1.5480 110.3480 50 m. **Museums:** SMK, USNM, YPM. **Collectors:** T. Harrisson, Padan, L. Labang, W.R.N., Medang, J. Bangga, Bunyim, Simian. **References:** Anon (1958), Harrisson (1964a, 1950b, 1951b, 1967), Fogden (1965b), Gregory-Smith (1997b). **Remarks:** Tom Harrisson’s house was (and still is) located on Pig Lane. Harrisson apparently had a substantial aviary at his house, including parrots, pigeons, and Hooded Pitta (Harrisson 1964a).

**Poai** (=Po Ai Road or Kampung Pok Ai, Melugu): 1.121 110.423 30 m. **Museums:** YPM. **Collectors:** R. Nangang.

**Pulau Baru:** 4.8590 115.0254 SL. **References:** Bakewell et al. (2017).

**Pulau Batu Sarong, Bako National Park:** 1.7470 110.4960 SL. **References:** Cranbrook et al. (2013).

**Pulau Bubunut:** 4.8897 115.0400 SL. **References:** Bakewell et al. (2017).

**Pulau Burung** (=Pulau Burong, Pulo Burong): 1.6333 110.8000 SL. **Museums:** RMC, SMK. **References:** Moulton (1914a), Banks (1935b), Harrisson (1952c), Yong (2009).

**Pulau Gador:** 1.975 109.6708 SL. **References:** Wilson (2002).

**Pulau Kera** (=Kra): 1.7030 110.3050 SL. **References:** Harrisson (1952d), Fogden (1965b).

**Pulau Kerengga Besar:** 1.9416 109.654 SL. **References:** Wilson (2002). **Remarks:** At low tide at Kuala Samunsam, Pulau Datu, Pulau Kerengga Besar, Pulau Kerengga Kecil, and Pulau Badar are connected to the mainland (Wilson 2002).

**Pulau Kerengga Kecil:** 1.94583 109.6541 SL. **References:** Wilson (2002).


**Pulau Patok** (=Pulau Patu): 2.7648 111.4009 SL. **References:** Edwards et al. (1986a,b), Edwards and Polshek (1987), Yeap et al. (2007), Wei et al. (2009), Bakewell et al. (2017). **Remarks:** Part of the Pulau Bruit IBA.
**Pulau Perapat:** 4.9156 115.3885 10 m. **References:** Bakewell et al. (2017).

**Pulau Ridan:** near 4.18 114.31 5 m. **Museums:** ROM. **Collectors:** C. Hose. **Remarks:** Old maps have Sg. Ridan as a tributary of the Baram just north of Marudi, and modern maps have the Ridan Ferry in the same area.

**Pulau Sampadi:** (=Sampadien); 1.732 110.089 SL-80 m. **References:** St. John (1862).

**Pulau Satang Besar, Talang Satang National Park** (=Turtle Island); 1.7800 110.1600 SL-200 m. **Museums:** SMK, UF, YPM. **Collectors:** Nondin, T. Harrisson, Junaidi, Tayun, D. Sigar, Nyando, Sliman, J. Bangga, Novi. **References:** Beccari (1904), Moulton (1914a), Banks (1935b), Harrisson (1952c), Smythies and Harrisson (1956), Voues (1959), Harrisson and Smythies (1963), Fogden (1965b), Medway (1970), McCormick (1975), Gregory-Smith (1996), Wilson (2004), Ilan et al. (2018), Azizi and Adrus (2019). **Remarks:** Migrants and shorebirds have been collected on Pulau Satang Besar.

**Pulau Satang Kecil, Talang Satang National Park:** 1.7580 110.1650 SL-75 m. **Museums:** NHMUK, RMC, SMK, YPM. **Collectors:** Sliman, Junaidi, Pu. **References:** Banks (1935b), Harrisson (1952c), Smythies (1999), Wilson (2004), Ilan et al. (2018).


**Pulau Triso** (=Teriso, Trisauh); 1.5180 110.9850 40 m. **References:** St. John (1862).

**Pulau Tukong Ara-Banun Wildlife Sanctuary, Overview:** This sanctuary consists of Pulau Tukong Ara (=Tokong Ara, Bird Rock), 1.7530 110.1900 SL, a rocky outcrop of 1.4 ha located 5km offshore in Santubong Bay; and Pulau Tukong Banun, 1.7340 110.1910 SL, a rocky outcrop closer to shore. **Collectors:** T. Harrisson. **References:** Smythies (1957a:655), Fogden (1965b,e, 1966b), Mackenzie and Salter (1986), Smaby-Stone (1991), Gregory-Smith (1996, 1997b, 1999), Sim and Japar (2000), Yeap et al. (2007). **Remarks:** A tern breeding and ringing site.


**Pulau Triso, Trisauh:** 1.732 110.089 SL-80 m. **Museums:** SMK, UF, YPM. **Collectors:** C. Hose. **Remarks:** Old maps have Sg. Ridan as a tributary of the Baram just north of Marudi, and modern maps have the Ridan Ferry in the same area.

**Pulau Sampadi:** (=Sampadien); 1.732 110.089 SL-80 m. **References:** St. John (1862).

**Pulau Satang Besar, Talang Satang National Park** (=Turtle Island); 1.7800 110.1600 SL-200 m. **Museums:** SMK, UF, YPM. **Collectors:** Nondin, T. Harrisson, Junaidi, Tayun, D. Sigar, Nyando, Sliman, J. Bangga, Novi. **References:** Beccari (1904), Moulton (1914a), Banks (1935b), Harrisson (1952c), Smythies and Harrisson (1956), Voues (1959), Harrisson and Smythies (1963), Fogden (1965b), Medway (1970), McCormick (1975), Gregory-Smith (1996), Wilson (2004), Ilan et al. (2018), Azizi and Adrus (2019). **Remarks:** Migrants and shorebirds have been collected on Pulau Satang Besar.

**Pulau Satang Kecil, Talang Satang National Park:** 1.7580 110.1650 SL-75 m. **Museums:** NHMUK, RMC, SMK, YPM. **Collectors:** Sliman, Junaidi, Pu. **References:** Banks (1935b), Harrisson (1952c), Smythies (1999), Wilson (2004), Ilan et al. (2018).


**Pulau Triso** (=Teriso, Trisauh); 1.5180 110.9850 40 m. **References:** St. John (1862).

**Pulau Tukong Ara-Banun Wildlife Sanctuary, Overview:** This sanctuary consists of Pulau Tukong Ara (=Tokong Ara, Bird Rock), 1.7530 110.1900 SL, a rocky outcrop of 1.4 ha located 5km offshore in Santubong Bay; and Pulau Tukong Banun, 1.7340 110.1910 SL, a rocky outcrop closer to shore. **Collectors:** T. Harrisson. **References:** Smythies (1957a:655), Fogden (1965b,e, 1966b), Mackenzie and Salter (1986), Smaby-Stone (1991), Gregory-Smith (1996, 1997b, 1999), Sim and Japar (2000), Yeap et al. (2007). **Remarks:** A tern breeding and ringing site.

Ridgeway Road, Kuching (=Ong Tiang Swee Road): 1.5280 110.3500 15 m. **Museums**: SMK. **References**: Anon (1958), Fogden (1965b).


Rodway Road, Kuching: 1.5410 110.3450 20 m. **References**: Fogden (1965b).

Ruan Sepakoi (=Ruan Sapakui): 4.6375 115.3958 965 m. **Museums**: YPM. **Collectors**: Lobo.


Rumah Limbang (=Pa Brunei): 4.3069 115.0500 70 m. **Museums**: SMK. **Collectors**: J.C. Moulton. **References**: Moulton (1912). **Remarks**: This site is in the Batu Lawi region of Sg. Limbang but has a Kelabit name (“Pa Brunei”).

Rumah Rantal: 1.9833 112.0060 50. **Museums**: YPM. **Collectors**: Abai. **Remarks**: Rice paddy.

Rumah Sawing, Ulu Sungai Mador, Binatang: 2.033 111.7958 50 m. **References**: Morrison (1950).


Sabu Forest Reserve: 1.2 111.4666 20 m. **Museums**: SMK. **Collectors**: A.H. Everett. **References**: Walden (1872), Sharpe (1877b).


Sadong-Saribas Coast IBA: **References**: Yeap et al. (2007). **Remarks**: This IBA extends from Kuala Samarahan to westernmost Kuala Rajang (north of Kabong).

Sadong Swamp Forest (=Sidong, Sadung): 1.22-1.38 110.68-110.83 SL. **References**: Scott (1989). **Remarks**: Along the east side of Sg. Sadong, a large expanse of flat low-lying peat swamp forest.


Samajaya Apartments, Kuching: 1.5320 110.3950 5 m. **References**: Hong and Mohd-Azlan (2018). **Remarks**: Secondary forest is near the apartments.


Samarahan Rubber Estate, Serian Road: **References**: Harrisson (1952b).


Samariang: 1.6290 110.3390 5 m. **Museums**: YPM. **Collectors**: Junaidi.


Philoveny et al. (2018), Ramji et al. (2022b). Remarks: A 22,798 ha wildlife sanctuary, which was also Sarawak’s first. It comprises the entire water catchment area of Sg. Samunsam, including mangrove/nipa to kerangas to mixed dipterocarp forests of Gm. Malaka, Puting, and Pueh (Scott 1989).


Saritok: 1.737 111.337 10 m. Museums: YPM. Collectors: J. Gaun.

Sarawak Club, Golfcourse and Swimming Pool, Kuching: 1.5450 110.3450 10 m. References: Harrisson (1950b, 1958b), Fogden (1965b). Remarks: This is the original Kuching golf course, on Crookshank Road (=Cruikshank Road).


Sebangan Coast: 1.5776 110.8010 SL. References: Bakewell et al. (2017).


**Sempadi Forest Reserve** (Sampadi): 1.6 110.05 50 m. **References:** MNS-BCC (2009b).

**Serian:** 11660 110.5660 20 m. **References:** Gregory-Smith (1997b), Rahman et al. (2015a), Razak et al. (2019).

**Sibu-Bintulu Road:** 2.8921 112.8649 20 m. **Museums:** LSU. **References:** Lim and Sheldon (2011), Gawin (2014), Lim et al. (2017), Moyle et al. (2017), Sheldon et al. (2019).

**Sibu, Overview:** 2.3000 111.8167 10 m. **Museums:** NHMUK, SMK, YPM. **Collectors:** A.H. Everett, B.E. Smythies, Bettington Collection. **References:** Sharpe (1876, 1877b), Everett (1889), Moulton (1914a), Harrisson (1950b, 1951b), Smythies (1950), Sheldon (1987), Gregory-Smith (1997b), Lim and Rahman (2005), Apun et al. (2011), Cranbrook et al. (2013), Bilung et al. (2014), Gawin (2014), Goh et al. (2018). **Remarks:** Everett collected many specimens here. Lim and Rahman (2005) and Cranbrook et al. (2013) compared genes of swiftlets from a house-farm in Sibu.

**Sibuti Wildlife Sanctuary:** 4.0320 113.7880 15 m. **Museums:** ANSP, RMC, SMK. **Collectors:** T. Harrisson. **References:** Harrisson (1966a), Morioka and Yang (1996), MNS-BCC (2002b,c,d), Hazebroek and Abang Kashim (2006), Kwan and Sim (2017). **Remarks:** A 678 ha sanctuary, mostly of peat swamp forest along Sg. Sibuti.


**Simunjan (=Simunjung):** 1.3900 110.7500 50 m. **Museums:** NHMUK, USNM. **Collectors:** A.R. Wallace, A.H. Everett. **References:** Wallace (1869), Walden (1872), Sharpe (1877b), Everett (1889), Ogilvie Grant (1903), Burton (1978). **Remarks:** Swamp forest.

**Simpang Tiga Roundabout, Kuching:** 1.3571 110.3560 15 m. **References:** MNS-BCC (2000b).

**Soon Hup Villa, Jalan Sungai Rait:** 4.2350 113.9590 10 m. **Museums:** LSU. **References:** Sheldon et al. (2019).

**Sri Aman, Overview** (=Simangang, Simanggang): 1.2360 111.4620 10 m. **Museums:** RMC, SMK, USNM, YPM. **Collectors:** R. Nangang, S. Mengga, H.C. Robinson. **References:** Moulton (1914a), Sheldon (1987), Gregory-Smith (1997b), Vooos (1950a), MNS-BCC (2002a), Yeap (2002b), Wei et al. (2009). **Remarks:** Simanggang is the old name for Sri Aman. Wei et al. (2009) surveyed the “Sri Aman ricefields.”

**Stambak** (=Stamback): 1.42 111.49 15 m. **Museums:** YPM. **Collectors:** Charles.

**St. Luke’s Mission, Sri Aman:** 1.227 111.467 17 m. **Museums:** USNM, YPM. **Collectors:** R. Nangang.

**Stapok Forest Reserve** (=Setapok): 1.4990 110.2833 25 m. **Museums:** YPM. **Collectors:** Junaidi, Dasar, Sliman, A. Anyi.

**Stapok Road Mile 3** (=Batu Kawa, Setapok Road, Batu 3): 1.507 110.295 15 m. **Museums:** YPM. **Collectors:** Kolang, Junaidi. **Remarks:** See Batu Kawa.

**Stapok Road Mile 4** (=Batu Kawa, Setapok Road, Batu 4, Sungai Besar): 1.507 110.280 5 m. **Museums:** UF, USNM, YPM. **Collectors:** T. Harrisson, Junaidi, Sliman, Charles, A. Anyi, R. Nyandoh, A. Abong, Gaining, J. Bangga, L. Labang, Jamili, Siwa, Puding, J. Gaun, Medang, Geng, Lemin, Kolang, Sulariman, Musluw, Padan, Bunyan, Ajun Ajak, Nawan. **References:** Sheldon (1987). **Remarks:** Specimen labels saying “Stapok Road, Sungai Besar” would be here, i.e., where Stapok Road crosses Sg. Sarawak.

**Stapok Road Mile 5** (=Setapok Road, Batu 5): 1.505 110.265 15 m. **Museums:** DMNH, UF, YPM. **Collectors:** Junaidi, A. Anyi, Nyandoh, Lobo, Puding, Padan, Sliman, L. Labang, Dasar. **References:** Sheldon (1987).

**Stapok Road Mile 6** (=Setapok Road, Batu 6): 1.501 110.253 **Museums:** UF, YPM. **Collectors:** Ajang, Nyandoh and Junaidi.

**Stapok Road Mile 7** (=Setapok Road, Batu 7): 1.495 110.240 15 m. **Museums:** YPM. **Collectors:** Nyandoh and Junaidi.


**Stutong, Kuching** (includes Stutong Market, Taman Stutong Indah): 1.52 110.375 10 m. **References:** Rahman et al. (2015a), Hong and Mohd-Azlan (2018), Razak et al. (2019). **Remarks:**
Samajaya Forest Park with peat swamp forest is nearby.

**Suai:** 3.9054 113.7344 10 m. **Museums:** LSU, SMK. **References:** Long and Collar (2002), Gawin (2014), Sheldon et al. (2019).

**Suai Valley:** 3.77 113.57 10 m. **References:** Harrisson (1966a).

**Suba Buan** (includes Lobang Si Buan and Lobang Suba): 1.4 110.11 20 m. **References:** Banks (1935b:318). **Remarks:** Banks listed swiftlet cave entrances “Lobang Si Buan” and “Lobang Suba” in the Bau area. Suba Buan and Suba Bau are in an area just north of Fairy Cave-Wind Cave Nature Reserve. This area has low elevation limestone hills, which at one time had nesting swiftlets, and it is likely that Banks was referring to it.

**Sujan:** 3.2 113.6 20 m. **References:** Samejima and Hon (2020). **Remarks:** Oil palm and mosaic landscape.

**Sungei Baleh** (=Batang Baleh, Balleh, Bali): 2.019 113.025 20 m. **References:** Banks (1935b), Smythies (1950). **Remarks:** Sg. Baleh is a major tributary of Sg. Rajang, entering c. 9.5 km east of Kapit. It forms the western and southern drainage of the Hose Mountains.

**Sungei Balui** (=Batang Balui, Baloi, Baluy): 2.1000 114.2250 230 m. **References:** Banks (1935b), Morrison (1950), Harrisson (1966a). **Remarks:** Sg. Balui is the largest Rajang tributary, entering east of Belaga at Long Murum. It forms the northeastern drainage of the Hose Mountains. The Balui near the Rajang is now a lake (Bakun) resulting from the construction of the Bakun Dam, and Long Murum is inundated.

**Sungai Bangkit, Paku:** 1.4730 111.4900 10 m. **Museums:** SMK, YPM. **Collectors:** J. Bangga, J. Gaun. **Remarks:** Apparently a north tributary of Sg. Paku. Also see Kuala Bangkit, Song, and Ulu Bangkit, Song.

**Sungai Bebiyong Besai, Batang Ai National Park:** 1.3083 112.0778 140 m. **References:** Lading et al. (2007). **Remarks:** Sg. Bebiyong Besai is a tributary of Sg. Lubang Baya, 8 km upstream from the Lubang Baya ranger station.

**Sungai Belaga** (=Batang Belaga, Belega, Balaga): 2.788 113.824 100 m. **Museums:** ROM, SMK, YPM. **Collectors:** A. Morrison (=A. Munison). **References:** Moulton (1914a), Banks (1935b), Smythies (1950).

**Sungai Beletik:** **References:** Bilung et al. (2014). **Remarks:** A forested tributary of Sg. Merit.

**Sungai Blebak, Sedilu National Park:** 1.398 110.8797 15 m. **References:** Wound and Sim (2017). **Remarks:** Peat swamp forest complex.

**Sungai Bubus:** 1.9786 111.9593 SL. **References:** Bakewell et al. (2017). **Remarks:** Extensive sand flats, healthy casuarinas.

**Sungai Buluh:** 2.5470 111.3028 SL. **References:** Bakewell et al. (2017).


**Sungai Dapur** (=Pa Dapur, Pah Dapur, Long Dapur, Sungai Libbun, Upper Baram): 3.4230 115.4530 735 m. **Museums:** AMNH, SMK. **Collectors:** T. Harrisson. **References:** Harrisson (1949a). **Remarks:** Sg. Libbun arises in the Tama Abu Range. It appears to be synonymous with Sg. Dapur, which eventually becomes Sg. Baram. The AMNH also has a specimen from “Long Baroh, Libbun River Flats,” i.e., presumably from a locations after Sg. Libbun reaches the Kelabit Plateau. Long Baroh, in turn, possibly refers to the confluence of Sg. Libbun and “Sg. Benju Baro,” which is the collecting locality of yet another AMNH specimen.

**Sungai Daro:** 2.4955 111.4223 SL. **References:** Wei et al. (2009), Bakewell et al. (2017).

**Sungai Engkalat, Igan:** **Museums:** SMK, YPM. **Collectors:** J. Gaun. **References:** Anon (1958), Sheldon (1987), Witt and Sheldon (1994a). **Remarks:** Peat swamp. This is apparently a tributary of Sg. Igan.

**Sungai Entoyut:** 4.146 114.345 5 m. **Museums:** AMNH, ANSP, ROM, USNM. **Collectors:** C. Hose. **Remarks:** This is a small tributary of Sg. Baram just upstream from Marudi on old maps (Hose 1893a, 1900).

**Sungai Jaong** (=Jawong, Ulu Sungai Jaong, Ulu Sungai Haong): 1.7170 110.3340 10 m. **Museums:** SMK, YPM. **Collectors:** J. Bangga, Brahim, Junaidi, Sliman, Narawi, Padan, Kebing, Novi, Gaing, T. Harrisson, C.B. Kong, A. Anyi, Puding, C.S. Yu, J. Gaun. **References:** Gawin (2014).

**Sungai Jelangai Wildlife Sanctuary:** 2.054 114.343 610 m. **Remarks:** A 19,331 ha sanctuary.

**Sungai Karap:** 3.87-4.22 114.1700 10 m. **References:** Scott (1989). **Remarks:** A sluggish tributary of Sg. Bakong in the Sg.
Baram system, which is uniquely overgrown with *Eichhornia crassipes*, 15 km west of Marudi.


**Sungai Kebab**: 4.9070 115.29 SL. **References**: Bakewell et al. (2017).

**Sungai Kepayang, Ulu Sebuyau National Park**: 1.625 111.6458 20 m. **References**: Wound and Sim (2017).

**Sungai Kubaan**: 3.73 115.18 400-600 m. **References**: Harrisson (1949b), Fogden (1970, 1976). **Remarks**: Fogden surveyed birds along Sg. Kubaan at the “headwaters of the Tutoh.”


**Sungai Langsat, Camp 6, Gunung Mulu National Park**: 3.9985 114.8284 420 m. **Museums**: LSU. **References**: Burner et al. (2016), Sheldon et al. (2019).

**Sungai Lassa, Belaga: Museums**: SMK, YPM. **Collectors**: A. Morrison. **Remarks**: Morrission (1950) collected at “Rumah Lassa, Balui,” which would be a head villager’s house somewhere on Sg. Balui.

**Sungai Lawas, Overview**: 4.8590 115.4070. **Museums**: AMNH, ANSP, FMNH, MNHN, NHMUK, OUMNH, ROM, SMK, YPM. **Collectors**: W.H. Treacher, H.T. Ussher, W. Pretyman, H. Low, A.H. Everett, J. Whitehead, J.B. Bell, J.S. Jameson, T. Harrisson, Padan, A. Morrison, J. Gaun, Gaing, D. Sgar. **References**: Sharpe (1874, 1877b,c, 1889a-d, 1890a-d, 1894b), Gurney (1882:302), Treacher (1888), Everett (1889), Whitehead (1893), Moulton (1914a), Kloss (1930), Banks (1935b), Stresemann (1937), Morrison (1950), Harrisson (1963a), Sheldon (1985, 1987), Gregory-Smith (1997b), Long and Collar (2002). **Remarks**: Sharpe (1874) described Bulver’s Pheasant from the “Mountains of Lanos”, by which he meant mountains in the Upper Lawas region (Treacher 1888). Sharpe (1879a) characterized the Treacher and Ussher collections as from the “Lawas River”, but some specimens are clearly from mountains (e.g., Crimson-headed Partridge).

**Sungai Lenin (=Lenian)**: 3.333 114.2657 30 m. **Museums**: MNS, RMC. **Collectors**: F. Adelborg, H.C. Robinson. **References**: Hill (1960), Rheindt et al. (2022). **Remarks**: Very close to Long Sobing in the Tinjar basin.

**Sungai Lobang**: 3.0800 114.4200 200-700 m. **References**: Harrisson (1933). **Remarks**: Harrisson traveled up Sg. Lobang to cross the Dulit divide from the Sg. Tinjar to Sg. Belaga.

**Sungai Lupar (=Batang Lupar)**: 1.4000 111.1000 SL. **Museums**: MCSNG, NHMUK. **Collectors**: O. Beccari. **References**: Beccari (1904), Banks (1935b), MNS-BCC (2002a).

**Sungai Matu**: 2.713 111.467 SL. **Collectors**: A.H. Everett. **References**: Sharpe (1876:42, 1877b), Everett (1889:207).


**Sungai Mendalam, Gunung Mulu National Park**: 4.328 114.902 30 m. **References**: Sim et al. (2010). **Remarks**: A hunting area in the park, which also includes the Mentawai ranger post.

**Sungai Mersan**: 1.7023 110.2750 SL. **References**: Bakewell et al. (2017).

**Sungai Miri**: 4.4120 114.0300 10 m. **Museums**: ANSP, ROM. **Collectors**: C. Hose.

**Sungai Niah**: 3.815 113.754 15 m. **References**: MNS-BCC (2002c). **Remarks**: Sg. Niah runs along the western edge of Niah National Park.

**Sungai Pelait**: 4.9070 115.2924 SL. **References**: Bakewell et al. (2017).

**Sungai Pelita**: 2.7791113.3166 10 m. **References**: Edwards and Polshek (1987).

**Sungai Puak (=Poak)**: 1.3580 110.1820 15 m. **Collectors**: A.H. Everett. **References**: Sharpe (1876, 1877b), Everett (1889), Bartlett (1896b:48), Laverty (2011). **Remarks**: Bartlett (1896b) mentioned several records from Puak, which is a stream apparently contiguous with Sg. Staat leading to Tegora (Porritt 2013). Sharpe (1876:42) also referred to a specimen from “Puak Hill.”

**Sungai Rajang (=Batang Rajang)**: 2.001 112.607 15 m. **References**: Smythies (1950), Harrisson (1966a), Gregory-Smith (1997b), Tuen (2006).

**Sungai Sadong, Overview (=Sidong, Sadung, Batang Sadong)**: 1.45-11875 110.69-110.5 SL. **Museums**: ROM, SMK. **References**: Moulton (1914a,c), Williams (1914), Harrisson (1950b), Vouos (1950b, 1951), Sheldon (1987), Long and Collar (2002). **Remarks**: The Sadong basin encompasses the Bidayuh Sadong-Bukar as well as Malay areas. The upper reaches are known as Batang Kayan.

**Sungai Samarahan, Overview (=Batang Samarahan)**: 1.552 110.479 5 m. **Museums**: NHMUK, RMC, SMK. **Collectors**: C. Ulok. **References**: Moulton (1914a), Williams (1914), Robinson...
Sungai Sarawak, Overview: 1.56 110.34 5 m. Remarks: The main river running through Kuching. It was an important conduit for collectors headed to Bau or Penrissen in early years.


Sungai Seping (Seping): 2.8750 114.5250 800 m. Museums: YPM.


Sungai Tuhun: References: Tuen (2006). Remarks: Tuen visited the Sg. Tunoh Rest House (2.0408 113.6756, secondary forest), Mabong Waterfall (primary forest and shifting agriculture), Gelangang Waterfall (2.0575 113.7553, recently logged mixed dipterocarp forest), and Gn. Magong (2.0683 113.6797, intact dipterocarp forest).


Talang Satang National Park, Overview (=Talang-Satang, Turtle Islands): References: Harrisson (1952c, 1957), Yeap et al. (2007), MNS-BCC (2012b), Illan et al. (2018). Remarks: This is a 19,414 ha park and IBA comprising two island groups. The first group lies off the coast near Sematan and consists of the two Talang-Talang islands: Pulau Talang Besar and Pulau Talang Kecil. The second group includes the Satang islands off the coast nearer Kuching, Pulau Satang Besar, Pulau Satang Kecil, and two small islets, Pulau Tukong Ara and Pulau Takung Banun. The latter two islands form the Pulau Tukong Ara-Banun Wildlife Sanctuary.


Tanah Putih, Kuching (=Tanah Puteh Army Camp): 1.55 110.38 5 m. References: Fogden (1965b,c).


Tanjung Batu, Bako-Buntal Bay: 1.7260 110.3570 SL. References: Bakewell et al. (2017).

Tanjung Batu, Bintulu: 3.2090 113.0440 5 m. References: Bakewell et al. (2017).

Tanjung Batu, Bintulu: 3.2090 113.0440 5 m. References: Bakewell et al. (2017).

Tanjung Batu, Similajau: 3.3520 113.1550 10 m. References: Bakewell et al. (2017).


Tanjung Kembang: 1.8723 111.1265 SL. References: Bakewell et al. (2017).


Tanjung Mani: 2.15 111.45 5 m. Museums: RMNH. Collectors: J. Vigeland.


Tanjung Mani: 2.15 111.45 5 m. Museums: RMNH. Collectors: J. Vigeland.


Tanjung Selabat and Batu Pisang Tikat: 1.6739 110.4948 SL. References: Bakewell et al. (2016:60). Remarks: “Tanjung Selebat is not an actual promontory, but a recent connection of stabilizing land between the shore and Batu Pisang Sikat, a tree-covered rock that once stood offshore.”


Tamabo Perak: References: Lönnberg (1925), Mjöberg (1925). Remarks: This is a site south of Pa Main in the Kelabit Highlands where Mjöberg collected the type of Dicaeum minullum borneanum on his return from Gn. Murud. It appears in Mjöberg’s (1925:413) sketch map.


Third Division Swamp Forests: References: Scott (1989). Remarks: A 150 km strip of coastline from Kuala Igan to Bintulu, extending up to 45 km inland comprising, principally, peat swamp forest of various types.


Ulu Anap: 2.43 112.87 150 m. References: Samejima and Hon (2020).

Ulu Bangkit, Song: 1.66 112.75 120 m. Museums: YPM. Collectors: B.E. Smythies. Remarks: Sg. Bangkit is an eastern tributary of Sg. Katibas. Also see Sungai Bangkit, Paku.


Ulu Limbang: 3.86 115.05 200 m. Museums: SMK. Collectors: H.H. and A.H. Lim and A. Abon.
References: Moulton (1914a).


Ulu Melinau, Gunung Mulu National Park (=Ulu Malinau): 4.1083 114.958 50. Museums: SMK. References: Moulton (2014a), Harrisson (1952a), Sim et al. (2010). Remarks: This part of the park includes the Summit Trail Camp 5, Pinnacles, trail to Kuala Litutu, and Melinau Gorge.

Ulu Melinau Paku, Gunung Mulu National Park (Mulu National Park HQ): 4.0541 114.825 50. References: Sim et al. (2010), Burner et al. (2016), Sheldon et al. (2019). Remarks: This area includes the Deer Cave boardwalk, canopy walk, bat observatory, boardwalk to the Royal Mulu Hotel, Clearwater Cave, Moonmilk walk, trail on Bau Bungan, and the summit trail to camp 3.


Ulu Pelagus (=Palagus): 2.1580 112.8750 350 m. References: Hose and McDougall (1912). Remarks: Hose and McDougall (1912:136) included photos of the “Palagus River” and “Palagus Falls.”


Wilmar-PPB Oil Palm Plantation: 3.4680 113.8050 30 m. References: Mohd-Azlan et al. (2019b). Remarks: Oil palm and an HCV-logged forest fragment. Birds were surveyed by mistnetting at 3.477 113.804 c. 200 m, and 3.567 113.767 c. 70 m. The plantation also included a swiftlet nesting cave at 3.509722 113.3439, but this may have been destroyed during construction of the Bintulu-Miri coastal highway (C.K. Lim, pers. comm.).


Yung Kong Fields (=Yong Kong): 1.5835 110.4118 5 m. References: Wei et al. (2009). Remarks: An field near the Yung Kong factory.

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