The Bartels and other egg collections from the island of Java, Indonesia, with corrections to earlier publications of A. Hoogerwerf

by Jan-Hendrik Becking†

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SUMMARY.—The oology of Java has been described in two longer publications by A. Hoogerwerf (Hoogerwerf 1949a, Hellebrekers & Hoogerwerf 1967). Here I present unequivocal proof that many of the clutches mentioned in those publications, and presented by Hoogerwerf as having been collected by himself, had been stolen by him from other collections, namely those of the Bartels family, of P. J. Bouma, and of my brother R. W. Becking and myself. Hoogerwerf doubtless accessed all three collections while unofficially employed at the Bogor Zoological Museum during and immediately after the Second World War. To conceal what he had done Hoogerwerf also falsified associated collecting data. One can only conclude that information on the oology of Java published by A. Hoogerwerf, or included in his collection now at the RMNH in Leiden, is untrustworthy. Furthermore the value of especially the Bartels egg collection is much greater than even experts think. I do not believe that M. P. J. Hellebrekers was in any way aware of what his co-author Hoogerwerf had done. A request by me 40 years ago to have this information published was refused by the editorial board of the journal concerned, who considered the subject too sensitive.

'Al is de leugen nog zo snel, de waarheid achterhaalt haar wel.' (Dutch proverb)
[No matter how fast the lie, the truth will catch up with it.]

Following the Second World War, two publications appeared by A. Hoogerwerf about the birds of Java and their eggs. The first, Hoogerwerf (1949a), was largely prepared while he worked at the Bogor Zoological Museum as a guest and refugee-in-hiding during the Japanese occupation of Java, and while he worked at the nearby Department of Forestry as Nature Conservation Officer after the war. Almost 20 years later, back in The Netherlands, Hoogerwerf published a follow-up (Hellebrekers & Hoogerwerf 1967). Therein, Hellebrekers described the Bartels egg collection, by then held in the Rijks Museum voor Natuurlijke Historie in Leiden (hereafter RMNH), whilst Hoogerwerf described his own egg collection, which went to RMNH shortly after his death in February 1977. In both publications Hoogerwerf stated explicitly that all the egg material mentioned by him, if not otherwise indicated, was from his own collection, taken mainly in West Java (Hoogerwerf 1949a: 1, Hellebrekers & Hoogerwerf 1967: 3).

As a former co-worker of the Bartels family, I possess much material such as collecting notes and very detailed lists of the Bartels egg collection, which I studied prior to the onset of war in the Pacific in December 1941. My aim here is to show that a very important part of Hoogerwerf's descriptions and colour plates of eggs were derived from the collections of others, especially the Bartels'. Moreover, Hoogerwerf apparently removed many eggs from the Bartels collection, especially those of rare species, and incorporated them into his own. He did this while the Bartels collection was at the Bogor museum during the Japanese occu-

pation. Hoogerwerf demonstrably also made unauthorised use of other egg collections present in the Bogor museum. To hide these facts Hoogerwerf gave the eggs he appropriated new numbers and false dates and localities, for which he often simply inserted the place where he used to live, i.e. the lower slopes of Mt. Salak near Bogor. These incorrect dates and localities were subsequently published in Hoogerwerf (1949a) and Hellebrekers & Hoogerwerf (1967).

Following publication of the latter, I wrote an article in English, similar to the present one, and submitted it to a Dutch ornithological journal. In the covering letter I suggested that Hoogerwerf be permitted to see my comments and respond publicly. The initial written reaction from the editorial board, dated 2 October 1969, assured me of publication, although the procedure would be long. It was agreed that Hoogerwerf should be asked to respond within three months, in English. However, it took him six months and he wrote it in Dutch, making it unpublishable in the journal concerned, as Hoogerwerf would have known. In addition, it was more than three times the length of my own manuscript (52 single-spaced pages). I was not allowed to see it by Hoogerwerf, but I obtained it very much later from the editors. I could only agree that it was indeed unpublishable, and not only because it was written in Dutch.

The editors declined to publish my article for two main reasons. First, to publish both articles (*c.*70 pages) would be too expensive. Second, my article was of a very sensitive nature. Subsequently, I received a personal letter (still in my personal archive) from the main editor, stating that it had been a very difficult decision, as they did not want to appear to take sides. A request of mine to Prof. L. D. Brongersma, Director of RMNH, to appoint an impartial commission to study the disagreement between Hoogerwerf and myself, was unsuccessful. Ernst & Hans Bartels, who had read my manuscript and could confirm some of my statements, wrote to the editor of the Dutch journal concerned on 6 May 1970 (in my archive), stating that the editor could not leave this case unresolved and also asking him to appoint a commission to investigate the problem. They received no reply.

As a close friend of the Bartels family and a co-worker on their collection, I feel I owe it to them to try once more to re-establish the real and enormous value of their egg collection. It is also important to show that information on the oology of Java published by Hoogerwerf, which has found its way into many important ornithological handbooks, is untrustworthy. I therefore describe here the historical context and the original collections involved. I give examples of clutches affected by Hoogerwerf's misdeeds, and discuss the implications for what is known of the oology of Java.

Historical context

After the Japanese attack on Pearl Harbor, the Netherlands followed the USA and declared war on Japan on 8 December 1941. All Dutch men of military age in the Dutch East Indies, trained or not, were called up to serve in the Royal Dutch East Indies Army (KNIL). The ornithologists / biologists Dr M. Bartels Jr., Dr A. C. V. van Bemmel, P. J. Bouma, A. Hoogerwerf, J. G. Kooiman, A. J. R. Lonsain, J. J. Ter Pelkwijk and G. F. H. W. Rengers Hora Siccama were among those drafted. Of these M. Bartels Jr., Bouma, Lonsain, Ter Pelkwijk and Rengers Hora Siccama did not survive the war.

Until he was drafted into the army, Hoogerwerf was employed as Nature Conservation Officer in the Department of Forestry of the Netherlands East Indies. The Department of Forestry was also in Bogor, but organisationally quite separate from the Zoological Museum. Shortly after the unconditional surrender of KNIL to the Japanese army on 8 March 1942, the Japanese placed Prof. T. Nakai, a botanist and plant taxonomist, in charge

of both the Royal Bogor Botanical Gardens (Kebun Raya) and the Bogor Zoological Museum (within the gardens). Soon afterwards Hoogerwerf reappeared in Bogor in civilian clothes and offered his services to the Japanese. At Hoogerwerf's own suggestion, Nakai permitted him to work in the Bird Division of the Zoological Museum. There was a supposed vacancy there as its head, Dr van Bemmel, was by then a prisoner of war and had been taken to work in the coal mines in Japan. Hoogerwerf thus never held an official position at the Bogor Zoological Museum, but, like several other Europeans, worked there only on sufferance from its director Lieftinck and from the Japanese while they were in power. When the Dutch temporarily returned to power in Indonesia in 1947, Hoogerwerf returned to his old position as Nature Conservation Officer in the Department of Forestry. He moved between Indonesia and the Netherlands until 1957, when he relocated to Dutch New Guinea and later permanently to the Netherlands (Voous 1995: 278–280).

Because my father was working next door as Head of the Department of Forestry, I had been in and out of the museum since primary school. During the school holidays in 1937, when I was 13, I was taught to prepare bird skins under the tutelage of P. F. Franck, head taxidermist of the Bogor museum. Later, in 1940–41, I was asked by the then director (1931–56) of the museum, M. A. Lieftinck, to collect certain bird species rare or lacking in the collection, using a small rifle. When invasion by the Japanese seemed imminent in December 1941, I was given an unpaid position at the museum, in the hope of safeguarding me as junior civilian from possible internment by the Japanese. I was 17 at the time. This position I held until late August 1945, when I left Indonesia for the University of Leiden.

Before the war, in 1937, I also came to know Max Bartels Jr., and was in close contact with him from 1939 until December 1941. Together we undertook many excursions to Java's montane forests, the lowland forests along the south coast of West Java (Pelabuanratu region), and the cliff islands along this coast. I had free access to his collection to measure bird skins and eggs, and to take notes. He, my brother Rudolf and I conducted a lively, near-weekly correspondence in which we exchanged and shared bird observations and egg acquisition data. Moreover, my brother and I were frequently allowed to study the Bartels collection at his home at Ciparay. I therefore became very familiar with this collection, and measured many of its eggs during this period.

The egg collections involved

During the Pacific War, three private egg collections found refuge at the Bogor Zoological Museum because of war circumstances.

The Bartels collection.—This was started by Max (M. E. G.) Bartels Sr., who was born on 24 February 1871 at Bielefeld, Westphalia, Germany. In 1895, at the age of 24, he came to Java to work as a planter for the agro-industrial company Crone and started collecting already en route from Jakarta to his new post near Surabaya in East Java. The next year, 1896, he moved to Pasir Datar near Sukabumi (West Java), where he was appointed manager of the 'Pangerango' Tea Estate, on the south-west slope of Mt. Pangrango, at *c.*1,000 m. He stayed there for the rest of his working life. Only after retiring in late 1928 did he move to Ciparay, on a nearby ridge, where he died on 7 April 1934.

Max Bartels Sr. married Lien Maurenbrecher, originally an elementary school teacher, but also a gifted painter of natural subjects including birds. They had three sons: Max Bartels Jr. (*b.* 1902), Ernst (*b.* 1904) and Hans (*b.* 1906). All three were keen naturalists and through many expeditions all over Java helped expand the family collections with bird observations and notes, skins, nests and eggs, and sometimes mammal skins. Max Jr.

obtained a Ph.D. in biology from the University of Bern in Switzerland, and in 1931 he returned to Java to work as an independent ornithologist and mammalogist. On his father's death in 1934 Max Jr. assumed curatorship of the family collections, which were housed at his home at Ciparay and which he and his brothers continued to expand.

In December 1941 Max and Hans were drafted into KNIL and soon after the capitulation of the Dutch army they were sent as prisoners of war to work on the notorious Burma railway for the Japanese. Their brother Ernst was imprisoned somewhat later and taken to the Cimahi civilian concentration camp near Bandung. The Bartels collection remained at Ciparay on his explicit wish, as also explained to Lieftinck, who approached Max Jr. about this as soon as war broke out.

In February–March 1944 the attention of the Indonesian police was drawn to zinc-clad containers, so-called 'Cambridge cans', being offered for sale on the black market at Sukabumi. Because the Bartels family had been living very close to Sukabumi for two generations, their collecting activities were well known locally. It was therefore rather easy for the Sukabumi police to trace these containers to the house of Max Jr. at Ciparay, where they had been used for protecting the family's zoological collections. In both the house and the storehouses where the zoological collections were held the police noticed signs of burglary and duly informed the Bogor museum.

Around the same time, in February–March 1944, there had been a military as well as a political change in Indonesia. The tide had turned against the Japanese, their army was on the defensive, even in retreat. To strengthen the army the Japanese authorities promised, and actually proclaimed, the liberation of Indonesia, if the Indonesians were willing to fight with them against the enemy. In this way they were able to recruit Indonesian soldiers and civilian workers for the army in their fight against the Allies (*cf.* de Jong 1985: 515, 912, 932). As part of this political shift, all governmental and administrative functions—thus also the management of the Bogor museum—passed into Indonesian hands.

In reaction to the news from the Sukabumi police, the new museum management decided to evacuate the Bartels collection to Bogor. This was to be supervised by Abdul Samat, then in the museum's service, but previously Max Jr.'s head taxidermist (see Becking 1989: 227). The Indonesians asked Prof. Nakai for military protection to safeguard the expedition, because roads outside the cities were not safe at that time. The collection was transported to the museum in four trips, each accompanied by two Japanese truck drivers and an armed Japanese officer (none of them interested in zoological collections or involved in their packing). When Hoogerwerf heard about this, he offered his help to Abdul Samat. Although Samat initially accepted his help, Hoogerwerf was barred from joining the final two trips, because he was apparently more interested in the papers, manuscripts and notes of the Bartels family than in packing bird skins (A. Samat pers. comm.). Hoogerwerf indeed acknowledged in a letter to Lieftinck, dated 27 February 1954, that he had been barred from joining these two trips (copy of this letter in my possession). Therefore, Hoogerwerf's claim that he rescued the Bartels collection, cited by Voous (1995: 204) and others, is untrue.

Max Bartels Jr. died as prisoner of war of the Japanese in the 'Chung Kai' prisoner camp in Thailand on 6 October 1943. His younger brother Hans, who also worked on the Burma railway but in another camp, survived the war. Their brother Ernst also survived.

In April 1946 the Bartels collection was sent by truck from the Bogor museum to Jakarta and subsequently by boat to the Netherlands, where it arrived at Leiden in September / October 1946. The Bartels collection comprised at that time 14,643 bird skins of Javan birds, more than 4,000 eggs of Javan birds, and more than 500 nests (see documents on the valuation of the collection in June / July 1948 by L. Coomans de Ruiter, lodged at RMNH). The entire collection was sold to RMNH for NLG 77,504 on 25 May 1954, after very protracted

(eight years!) negotiations with the remaining two Bartels brothers, primarily Ernst. The Bartels egg collection was officially incorporated into the museum on 1 July 1954, when accession cards were filled out.

In 1969–70, under the curatorship of G. F. Mees, I was permitted to inspect the Bartels collection, its eggs as well as its bird skins.

The Bouma collection.—Around 1937 the P. J. Bouma egg collection from Java had become *de facto* part of the Bartels collection. Bouma was for many years a forest manager in West Java (Sumurkondang and Cileduk) and later Central Java (Gundih or Gundik). Gundih (07°12′S, 110°53′E) was his last posting on Java, and where he undertook most of his collecting. He and Max Bartels Jr. were long-time friends who undertook many excursions together (see, e.g., Bouma 1932, 1934, Bartels 1937, Bartels & Bouma 1937). In 1937, a year before the Forestry Department transferred Bouma from Java to Samarinda in Borneo, he and Max Jr. agreed that Bouma's egg collection from Java should be incorporated into the Bartels collection.

In the year before Bouma's departure and in the three years before the Pacific War started, many of Bouma's eggs were gradually incorporated into the Bartels collection by Max Jr. The clutches were all from Gundih. Examples are eggs of Chestnut-breasted Malkoha *Rhamphococcyx curvirostris*, collected 18 March 1936–8 May 1936, 23 clutches totalling 44 eggs (RMNH 39004–39017, 39021–39029); Green Peafowl *Pavo muticus*, 31 October 1935 (RMNH 29765); Brush Cuckoo *Cacomantis variolosus*, 10 March 1936 (RMNH 388965); Brown Boobook *Ninox scutulata*, 3 May 1936 (RMNH 39070); and Richard's Pipit *Anthus novaeseelandiae*, 27 May 1936 (RMNH 39473).

During the operation to remove the Bartels collection to Bogor in February–March 1944, Hoogerwerf visited the Bartels' house at Ciparay under the supervision of Abdul Samat. Although Hoogerwerf thus knew of the origin of the Bouma collection, in discussing its contents (Hoogerwerf 1949a: 2, 4) he never mentioned that the collection actually came from the private house of Max Bartels Jr. at Ciparay. And, instead of negotiating with the owners of the Bartels collection (the surviving brothers Ernst and Hans), Hoogerwerf only contacted P. J. Bouma's brother, J. P. Bouma, in the Netherlands, who had never been in Indonesia and was unacquainted with the actual situation there. J. P. Bouma was probably not informed by Hoogerwerf about P. J. Bouma's transferral of his egg collection to the Bartels collection before the war. At Hoogerwerf's suggestion, J. P. Bouma thus agreed to donate his brother's egg collection to the Bogor museum, where it came under Hoogerwerf's care and ultimately, in part, into his possession.

Proof of P. J. Bouma's transfer of his egg collection lies in the incorporation of a considerable number of Bouma's eggs into the Bartels collection, species by species, well before Bouma's departure for Borneo and long before World War II (e.g. all of the clutches from Gundih cited above). Complete incorporation could not take place once the war had started, because Max Jr. was by then in the army, from which both he and Bouma did not return. Moreover, Bouma had an extensive collection of over 1,000 Java bird specimens, many prepared by Max Jr.'s staff and originally also stored in the latter's house. This collection Bouma took with him to Borneo in 1938. That he did not also take his egg collection provides further proof that it had been donated to Dr Max Bartels Jr.

In February 1953 Lieftinck asked the German ornithologist J. E. Jany, then working at the Bogor museum, to provide the Bouma collection with labels and to register it on a card index. Jany found that many of Bouma's teakwood trays had empty egg boxes, and Lieftinck wrote to Hoogerwerf for an explanation. Hoogerwerf (then at the Forestry

Department) replied by return (13 March 1953) that the Bouma collection had been like that when he saw it for the first time at Ciparay.

The Becking collection.—This egg collection of Javan birds was started in 1936–37 by my older brother Rudolf W. Becking and myself. It comprised *c.*1,500 clutches by the time the Japanese forces approached Java. In 1938, I also started a small private skin collection, which at the time of the Japanese invasion numbered *c.*150–200 specimens. During the war our egg and bird skin collections were stored at the Bird Division of the Bogor museum, with Dr Lieftinck's consent. The collection was taxonomically arranged and all clutches were in separate boxes. Although, after August 1945, I did not return to Bogor until many years later (between 1971 and 2001 I revisited Indonesia 12 times), my brother, still in Indonesia, reclaimed the collection from the museum in April 1947 and, when he finally received it, noted that many egg boxes had been emptied. This had clearly been done selectively, since it was particularly the boxes with clutches of Accipitridae and Falconidae, of *Pavo muticus* and of many smaller rare species that were empty.

The Hoogerwerf collection.—Finally, there is Hoogerwerf's private egg collection, which he described in Hoogerwerf (1949a) and in Hellebrekers & Hoogerwerf (1967). Following Hoogerwerf's death on 5 February 1977, the collection was donated to RMNH by his widow, and was incorporated into the museum collection on 27 April 1977, when accession cards were completed. The present curator of birds at RMNH, H. van Grouw, kindly allowed me to examine the collection in 2005–07.

Relevant written material

Besides the egg collections, important evidence is provided by documentation of the various collections involved. In addition to Hoogerwerf's oological publications (Hoogerwerf 1949a, 1950a,b, Hellebrekers & Hoogerwerf 1967), I have in my possession the following original manuscripts, or in one case (C) copies of the original writings.

A.—Three handwritten lists of clutches present in the Bartels collection until 1927, written by Hans Bartels. One list is nearly complete, with only a few species lacking. (See Fig. 1, nos. 1–3, Fig. 2, nos. 4–6, Fig. 3, nos. 7–8, Fig. 4, nos. 10, 11, 13–14, Fig. 5, no. 15.)

B.—Two handwritten lists of eggs collected by Hans Bartels during his 'sabbatical year', which his father gave him to observe birds and collect eggs of species not yet present in the Bartels collection (see Becking 2001), before starting planter's training in Deventer, the Netherlands. The two lists cover the periods 1 March 1927–2 September 1927 and 3 September 1927–2 March 1928. (See Fig. 3, no. 9.)

C.—Letters by Hans Bartels at Sukabumi to his brother Max Jr. in Bern, Switzerland, where the latter was studying biology. These letters, dated 10 April 1927 to 2 July 1928, contain much discussion about bird observations and egg acquisitions, including new records for the Bartels collection. (Copies only; the originals are in the K. H. Voous archives in the Artis Library, Amsterdam.) (See Fig. 1, no. 3a, Fig. 2, nos. 4a, 5a, Fig. 3, no. 9a.)

D.—A daily acquisition list of eggs handwritten by Max Bartels Jr., covering the period 6 September 1940–23 May 1941. (See Fig. 4, no. 12, Fig. 5, no. 16.)

E.—A daily acquisition list of eggs (E,a) and notes and notebooks (E,b) handwritten by Max Bartels Jr., covering the period 1932–36. (See Fig. 2, no. 6a, Fig. 3, no. 6b.)

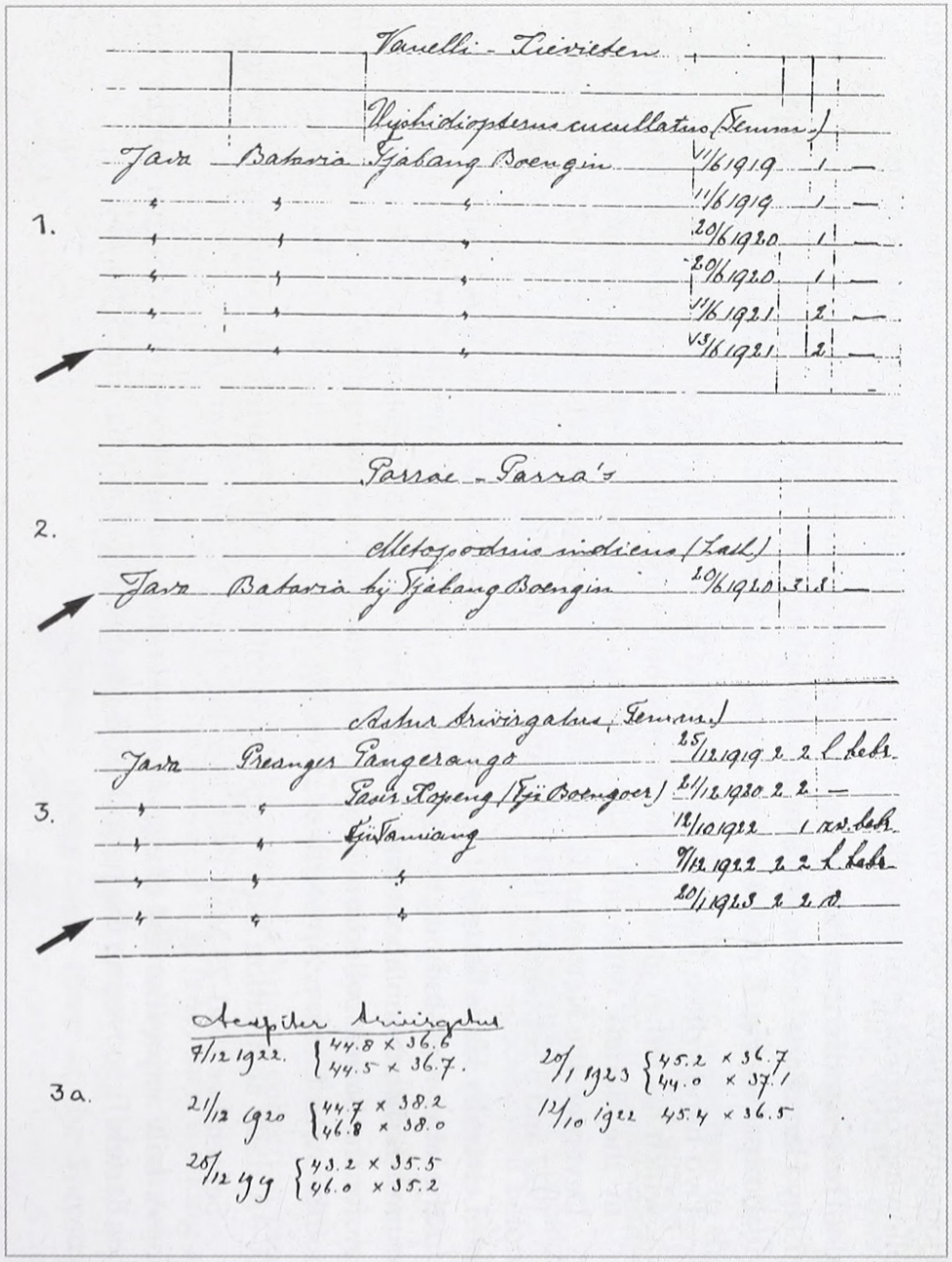


Figure 1

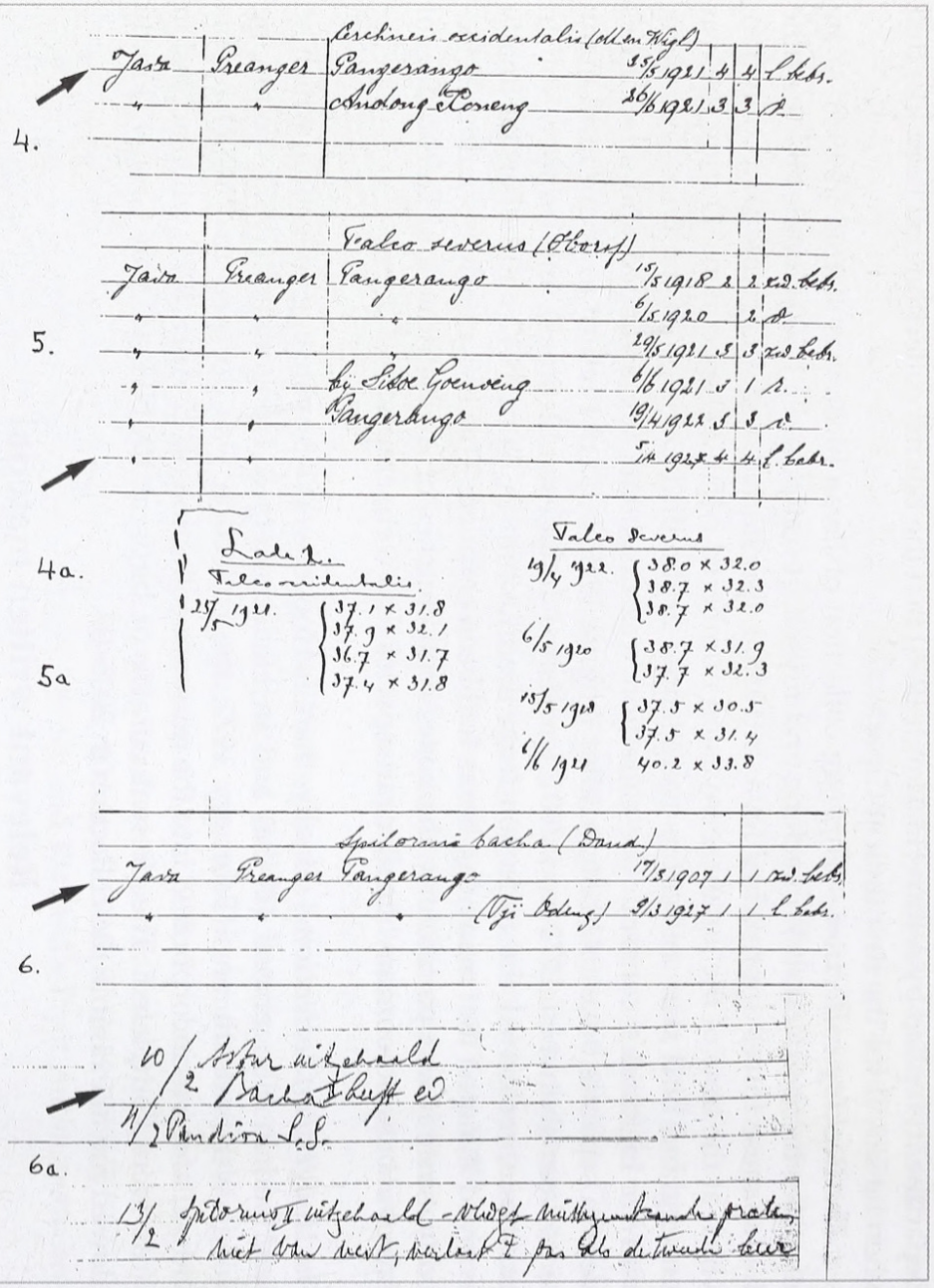


Figure 2

F.—Some of the near-weekly letters by Max Bartels Jr. to my brother Rudolf and myself during 1939–41, mentioning and discussing additions to the collection. Many letters are partially missing or severely damaged by unknown events in August 1945–April 1946 at the Bogor museum. My brother Rudolf saved about ten letters in April 1947 when he retrieved our private collection from Bogor.

G.—Notes and measurements of eggs in the Bartels collection made by me during my stays at Ciparay with Max Bartels Jr. (1939–41).

H.—Notes concerning egg measurements, fresh weights and shell weights of eggs held in the Becking collection. Typescript with some handwriting by my brother and myself, and also by my father, who taught us to work more systematically and to list collection data for each species separately in well-organised separate files. (See Fig. 5, no. 25, Fig. 6, nos. 26–27, Fig. 7, nos. 28–30, Fig. 8, no. 31.)

Examples of removed eggs and altered data

Considerations of space limit me to examples for only 31 species in this paper. Many others could, however, also be cited. Of the examples, 17 concern the Bartels collection, seven the Bouma collection and seven the Becking collection. For each of species nos. 1–18 and for no. 25 I first cite the relevant information about the clutch or clutches concerned, as presented in (*a*) Hoogerwerf (1949a, on Hoogerwerf's own collection), (*b*) Hellebrekers *in* Hellebrekers & Hoogerwerf (1967; on the Bartels collection), and (*c*) Hoogerwerf *in* Hellebrekers & Hoogerwerf (1967; again on Hoogerwerf's own collection). I also mention (*d*) the clutches of each species present in Hoogerwerf's own egg collection as it came to RMNH a few months after his death. Note that in Hellebrekers & Hoogerwerf (1967) Hoogerwerf's remarks about a particular species always directly follow those of Hellebrekers, so the relevant page is given only for Hellebrekers; note also that, for brevity, (*b*) and (*c*) are referred to in the case study headings below simply as Hellebrekers (1967) and Hoogerwerf (1967).

Square brackets [. . .] denote translations; 2/1 means two clutches of one egg, 4/2 means four clutches of two eggs, etc.; the x symbol in Hoogerwerf's tables signifies egg-laying or breeding data not based on clutches present in the collection concerned (see Hoogerwerf 1949a: 5, footnote).

Following these entries, inconsistencies between the four data sources, with other sources and occasionally with other writings of Hoogerwerf, are discussed. An alternative explanation for the origin of the clutches concerned is given and supported with references to the unpublished mss. A–H listed above. Relevant entries in these manuscripts are presented in Figs. 1–8. Where scientific names have changed these are indicated.

Captions to figures on opposite page

Figure 1. Egg collection data in manuscripts of the Bartels family concerning (1) Javan Lapwing *Vanellus macropterus* (= *Xiphidiopterus cucullatus*), (2) Bronze-winged Jacana *Metopidius indicus* and (3 and 3a) Crested Goshawk *Accipiter trivirgatus* (= *Astur trivirgatus*); (1–3) from ms. A, three handwritten lists of clutches present in the Bartels collection until 1927, written by Hans Bartels; (3a) from ms. C, letters by Hans Bartels at Sukabumi to his brother Max Jr. in Bern, Switzerland, dated 10 April 1927–2 July 1928.

Figure 2. Egg collection data in manuscripts of the Bartels family concerning (4 and 4a) Spotted Kestrel *Falco moluccensis* (= *Cerchneis occidentalis* or *F. occidentalis*), (5 and 5a) Oriental Hobby *F. severus* and (6 and 6a) Crested Serpent Eagle *Spilornis cheela* (= *S. bacha*); (4, 5 and 6) from ms. A, three handwritten lists of clutches present in the Bartels collection until 1927, written by Hans Bartels; (4a and 5a) from ms. C, letters by Hans Bartels at Sukabumi to his brother Max Jr. in Bern, Switzerland, dated 10 April 1927–2 July 1928; (6a) from ms. E,a, a daily acquisition list of eggs handwritten by Max Bartels Jr., covering the period 1932–36.

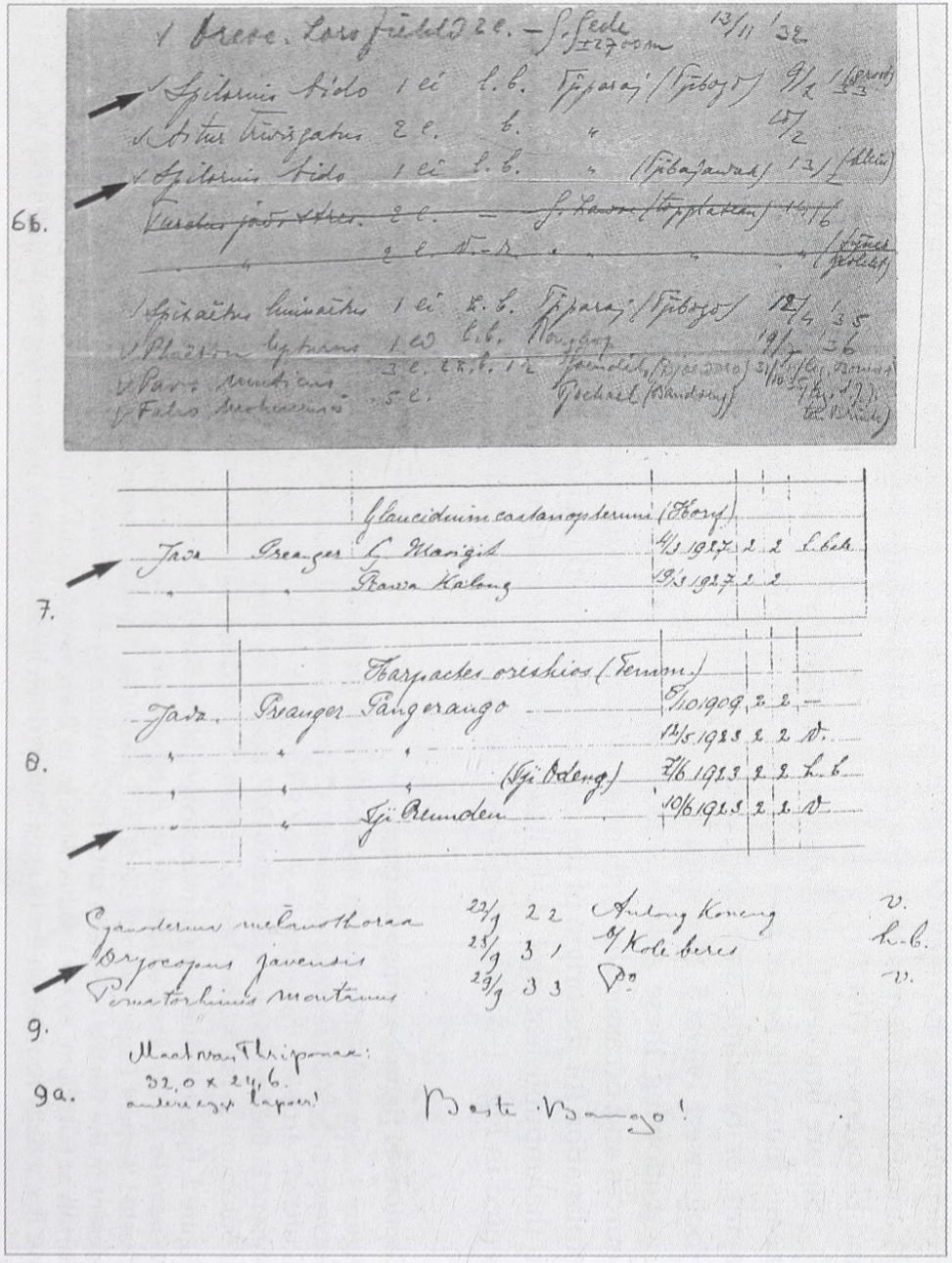


Figure 3

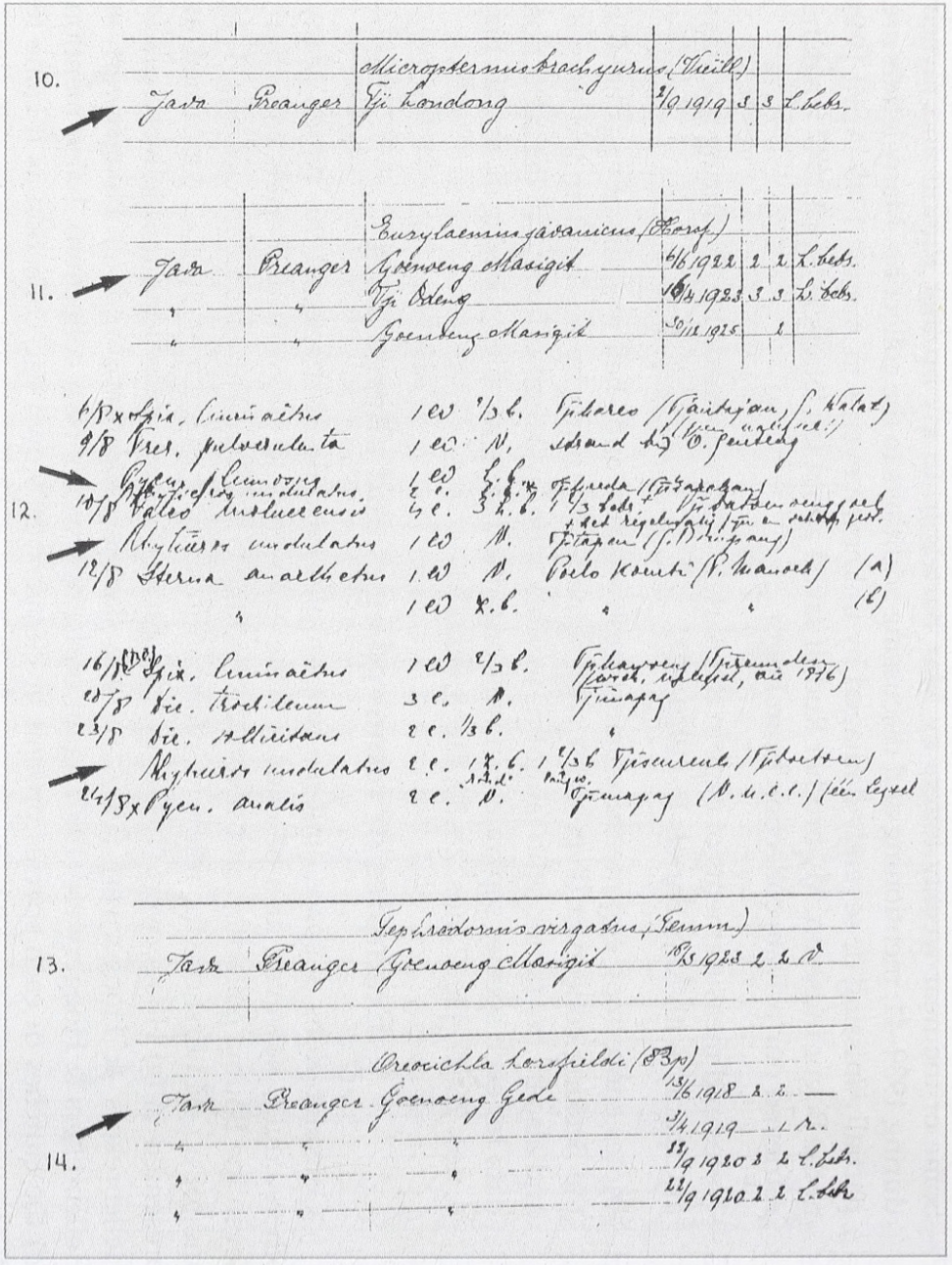


Figure 4

Significance of the egg measurements

Length and width measurements of the same egg may vary due to 'read-off' error, individual measurement error, and operator bias. Acceptable differences in measurements for the same egg by different operators are *c.*1% for egg length, and 1.5–2.0% for egg width (pers. obs.). Of the 21 species mentioned here for which Hoogerwerf and Hellebrekers provide sufficient egg measurements, the average spread in length, i.e. the difference between the shortest and longest egg, is 7.7% (and up to 16%). Fifteen of 21 species show a spread in length of more than 4.9%, five times the measurement error of 1%. The average spread in width is 5.1% (up to 9.0%). Fifteen of 21 species show a spread in length of 3.0% or greater.

Length and width measurements published by Hoogerwerf for eggs of these 15 species are presented below. Hoogerwerf claimed that these eggs were all collected by him. However, the length *and* width measurements of these more than 100 eggs of species with quite variable egg dimensions, can be matched, to within less than the measurement error of 1–2%, with the measurements of eggs missing from collections under Hoogerwerf's care. The measurements match not only egg by egg, but also clutch by clutch. The chances that Hoogerwerf collected precise duplicates for all these eggs and clutches are nil. The only logical conclusion is that Hoogerwerf took these eggs from the collections involved and presented them as collected by himself, which is corroborated by the presence, in Hoogerwerf's collection, of eggs from other collections that are individually identifiable because of their extreme dimensions, unusual markings, the presence of a scar, or the presence on the shell of remnants of lettering from an earlier label.

The Bartels collection

1. **JAVAN LAPWING** *Vanellus macropterus*

(*a*) Hoogerwerf (1949a: 58): [Examined material: three eggs, clutch size four eggs, measurements one egg: 44.30 × 32.90, breeding season May (1), June (x)].

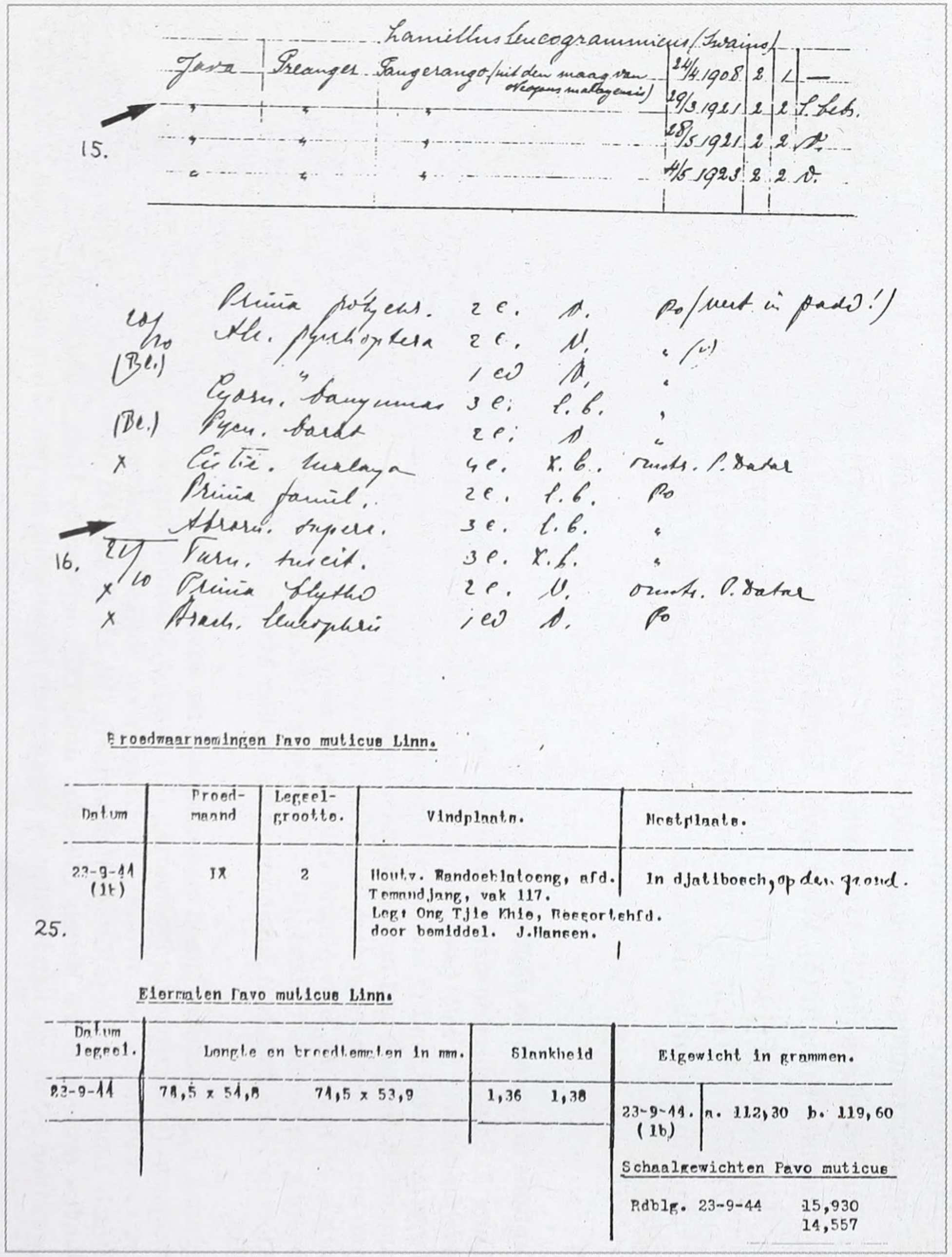
(*b*) Hellebrekers (1967: 34): 'Bartels: 4/1, 1/2, 1/4; May (1), June (5); Rawah Tangerang (1), Cabang Bungin (5), West Java'. Gives measurements and weights of all ten eggs.

(*c*) Hoogerwerf (1967): '1/2; June; Citarum estuary, near Jakarta, West Java. Measurements (2): 47.2 × 30.6, 47.8 × 31.8; weight (1) 1.709. For two previously recorded breeding dates and three earlier measured eggs see Hoogerwerf (1949a: 58–59)'.

Captions to figures on opposite page

Figure 3. Egg collection data in manuscripts of the Bartels family concerning (6b) Crested Serpent Eagle *Spilornis cheela* (= *S. bido*) (see arrows), (7) Javan Owlet *Glaucidium castanopterum*, (8) Orange-breasted Trogon *Harpactes oreskios*, and (9 and 9a) White-bellied Woodpecker *Dryocopus javensis* (= *Thriponax javensis*); (6b) from ms. E, b, notes and notebooks handwritten by Max Bartels Jr., covering the period 1932–36; (7 and 8) from ms. A, three handwritten lists of clutches present in the Bartels collection until 1927, written by Hans Bartels; (9) from ms. B, two handwritten lists of eggs collected by Hans Bartels during his 'sabbatical year', covering the periods 1 March 1927–2 September 1927 and 3 September 1927–2 March 1928; (9a) from ms. C, letters by Hans Bartels at Sukabumi to his brother Max Jr. in Bern, Switzerland, dated 10 April 1927–2 July 1928.

Figure 4. Egg collection data in manuscripts of the Bartels family concerning (10) Rufous Woodpecker *Celeus brachyurus* (= *Micropternus brachyurus*), (11) Banded Broadbill *Eurylaimus javanicus*, (12) Wreathed Hornbill *Rhyticeros undulatus* (see arrows), (13) Large Wood Shrike *Tephrodornis gularis* (= *T. virgatus*) and (14) Scaly Thrush *Zoothera dauma* (= *Oreocichla horsfieldi*); (10, 11, 13 and 14) from ms. A, three handwritten lists of clutches present in the Bartels collection until 1927, written by Hans Bartels; (12) from ms. D, a daily acquisition list of eggs handwritten by Max Bartels Jr., covering the period 6 September 1940–23 May 1941.



15.

Lamellus leucogrammicus (Swinoe)

Java	Preanger	Sangerango (uit den maag van Otopus malayensis)	24/4.1908	2	1	—
"	"	"	29/3.1921	2	2	S. Leb.
"	"	"	28/5.1921	2	2	R.
"	"	"	4/5.1923	2	2	D.

16.

20/10	Prinia polychr.	2 e.	D.	Po (met in padi!)
	Alc. pyrrhoptera	2 e.	D.	" (v)
(Bl.)	"	1 ei	D.	"
	Cyorn. banyumas	3 e.	l.b.	"
(Bl.)	Pycn. bardo	2 e.	D.	"
x	Cist. malaya	4 e.	X.b.	omstr. P. Datar
	Prinia famil.	2 e.	l.b.	Po
	Aphrom. super.	3 e.	l.b.	"
20/10	Turn. suscit.	3 e.	X.b.	"
x	Prinia blythi	2 e.	D.	omstr. P. Datar
x	Brach. leucophrys	1 ei	D.	Po

25.

Broedwaarnemingen Pavo muticus Linn.

Datum	Broedmaand	Legsel-grootte.	Vindplaats.	Nestplaats.
23-9-44 (1t)	IX	2	Houtv. Randoeblatoeng, afd. Temandjang, vak 117. Leg: Ong Tjie Khie, Boschopzichter door bemiddel. J.Hansen.	In djatibosch, op den grond.

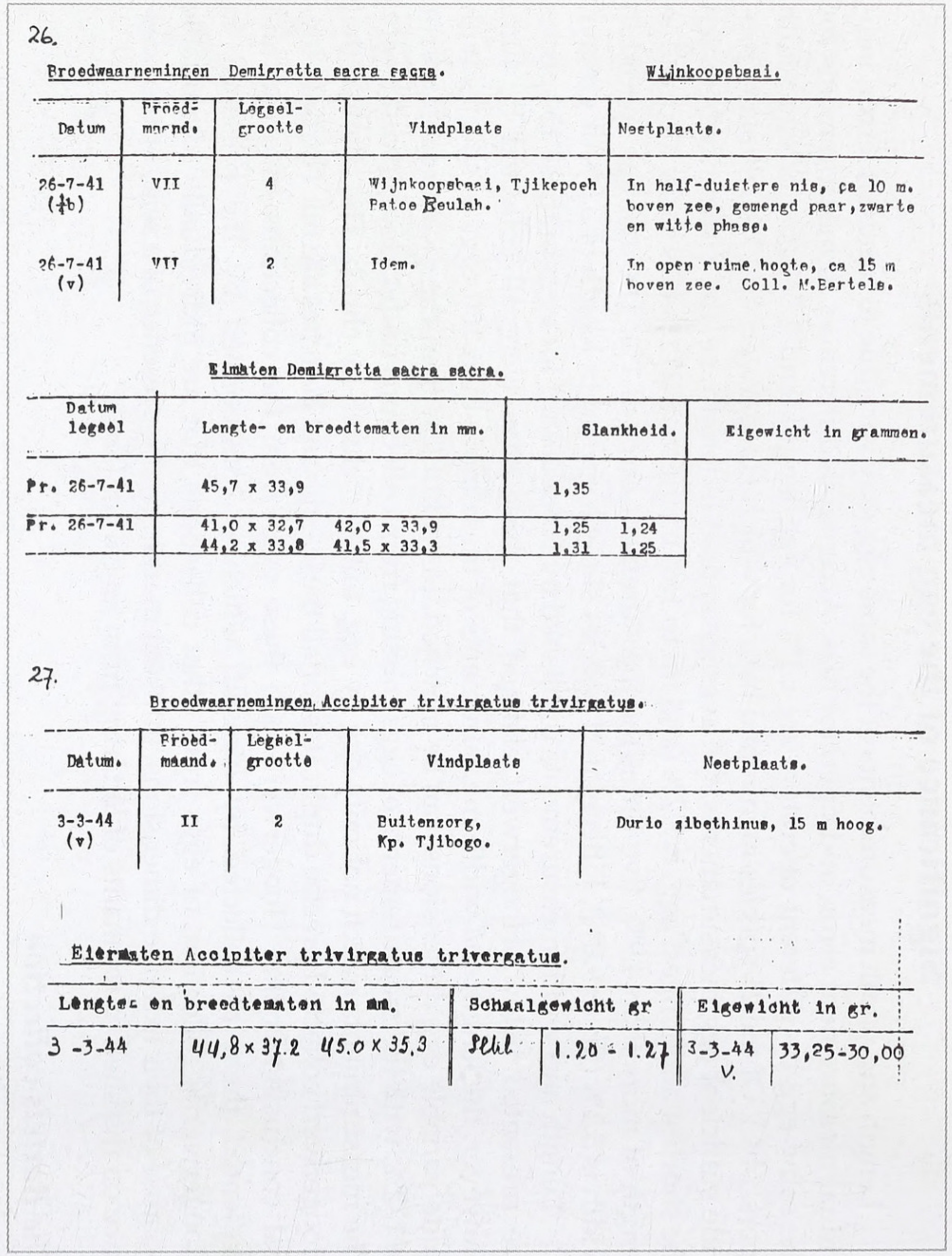
Eiermaten Pavo muticus Linn.

Datum legsel.	Lengte en breedtematen in mm.		Slankheid		Eigewicht in grammen.	
23-9-44	78,5 x 54,8	74,5 x 53,9	1,36	1,38	23-9-44. (1b)	n. 112,30 b. 119,60

Schaalgewichten Pavo muticus

Rdblg.	23-9-44	15,930
		14,557

Figure 5



26.

Broedwaarnemingen Demigretta sacra sacra. Wijnkoopsbaai.

Datum	Broedmaand.	Legsel-grootte	Vindplaats	Nestplaats.
26-7-41 (4b)	VII	4	Wijnkoopsbaai, Tjikepoeh Patoe Beulah.	In half-duistere nis, ca 10 m. boven zee, gemengd paar, zwarte en witte phase.
26-7-41 (v)	VII	2	Idem.	In open ruime hogte, ca 15 m boven zee. Coll. M.Bertels.

Eimaten Demigretta sacra sacra.

Datum legsel	Lengte- en breedtematen in mm.		Slankheid.		Eigewicht in grammen.
Pr. 26-7-41	45,7 x 33,9		1,35		
Pr. 26-7-41	41,0 x 32,7	42,0 x 33,9	1,25	1,24	
	44,2 x 33,8	41,5 x 33,3	1,31	1,25	

27.

Broedwaarnemingen Accipiter trivirgatus trivirgatus.

Datum.	Broedmaand.	Legsel-grootte	Vindplaats	Nestplaats.
3-3-44 (v)	II	2	Buitenzorg, Kp. Tjibogo.	Durio zibethinus, 15 m hoog.

Eiermaten Accipiter trivirgatus trivergatus.

Lengte- en breedtematen in mm.			Schaalgewicht gr		Eigewicht in gr.	
3-3-44	44,8 x 37.2	45.0 x 35,3	Schl.	1.20 - 1.27	3-3-44 V.	33,25-30,00

Figure 6

(*d*) Hoogerwerf private collection: two clutches: 1/2 '13.06.1940, Citarum delta, W. Java' (RMNH 75549) and 1/1 'c.1940, Citarum delta, W. Java', with no further particulars (RMNH 75548).

Hoogerwerf (1949a) gave little information for the three eggs in his collection. In Hellebrekers & Hoogerwerf (1967) he gave a locality for the collection of one two-egg clutch, but only a collection month, no precise date. In his own collection, at his death ten years later, there were two clutches, 1/2 and 1/1, of this endemic and then probably already extinct species, with a precise collection date for one, but only an approximate year for the other. Hoogerwerf gave no indication that these clutches were not taken by him, yet the collection information is very limited. All this casts doubt on the true origin of these eggs.

That the *V. macropterus* eggs in his collection were not collected by Hoogerwerf also seems probable from a statement by Hoogerwerf in a manuscript entitled 'Birds of Java', updated by him as late as April 1965 and given by his widow to the Zoological Museum in Amsterdam through Dr P. J. H. van Bree, then secretary of the Van Tienhoven Foundation (by which Hoogerwerf had occasionally been employed). On p. 86 Hoogerwerf wrote of *V. macropterus*: 'We have never observed this species in nature'. In addition Hoogerwerf (1949a) stated that the clutch size is four, but did not indicate that this knowledge came from a collection other than his own. He wrote this after having had access to the Bartels collection during the war, which collection contains the only four-egg clutch of the Javan Lapwing in the world.

Furthermore, a photostat of the clutches in Hans Bartels' handwritten list of acquisitions up until 1927, ms. A, is presented in Fig. 1, no. 1, under the name *Xiphidiopterus cucullatus*. Six clutches have been entered, 4/1 and 2/2. When this is compared with the clutches listed for the Bartels collection by Hellebrekers, 4/1 and 1/2, it is clear that one two-egg clutch of the Bartels collection was missing by 1967. The measurements I made of one of the two-egg clutches at the home of Max Bartels Jr. before World War II, labelled '13/6 1921 Batavia, Tjabang Boengin', are 47.8 × 32.0 and 47.4 × 30.8 mm (ms. G). These measurements are, within an error of 0.1–0.2 mm, identical to those for the clutch under RMNH 75549 in Hoogerwerf's private collection: 47.8 × 31.8 and 47.2 × 30.6 mm.

Given the above, one can only conclude that the missing clutch from the Bartels collection and the two-egg clutch in Hoogerwerf's private collection are the same. For this clutch Hoogerwerf gave as collection date '13 June 1940', whilst for the Bartels clutch it was '13 June 1921': Hoogerwerf did not alter the day of collection, but he made a very substantial 19-year change to the year.

The other *V. macropterus* egg in the Hoogerwerf collection (Hoogerwerf 1967, clutch 1/1), stated by Hoogerwerf to have been collected around 1940, is quite likely also originally from the Bartels collection. Like the four-egg clutch, this clutch was not yet included in Hans Bartels' list (ms. A) shown in Fig. 1, no. 1. Its measurements, 44.3 × 32.9 mm, coincide

Captions to figures on opposite page

Figure 5. Egg collection data in manuscripts of the Bartels and Becking families concerning (15) Spotted Crocias *Crocias albonotatus* (=*Laniellus leucogrammicus*), (16) Yellow-bellied Warbler *Abroscopus superciliaris* (see arrow) and (25) Green Peacock *Pavo muticus*; (15) from ms. A, three handwritten lists of clutches present in the Bartels collection until 1927, written by Hans Bartels; (16) from ms. D, a daily acquisition list of eggs handwritten by Max Bartels Jr., covering the period 6 September 1940–23 May 1941; (25) from ms. H, notes concerning egg measurements, fresh weights and shell weights of eggs held in the Becking collection, by my brother R. W. Becking and myself, and by our father J.-H. Becking Sr.

Figure 6. Egg collection data in manuscripts of the Becking family concerning (26) Reef Egret *Egretta sacra* (= *Demigretta sacra*) and (27) Crested Goshawk *Accipiter trivirgatus*; both from ms. H, notes concerning egg measurements, fresh weights and shell weights of eggs held in the Becking collection, by my brother R. W. Becking and myself, and by our father J.-H. Becking Sr.

Broedwaarnemingen Accipiter virgatus virgatus. Art jamanik.

Datum	Broed-maand.	Legsel-grootte	Vindplaats.	Nestplaats.
10-4-41 (v)	IV	2	Rasamala-cultuur beneden MC 50.	Altingia excelsa, 9 m hoog. Vogel zat zeer vast op het nest Nest bedekt met vereche Podocarpus en Altingia twijgen.

28.

Eiermaten Accipiter virgatus virgatus.

Lengte- en breedte-maten in mm		Schaalgewicht gr.		Eigewicht in gr.	
10-4-41 (v)	36.1 x 29.7	35.7 x 29.3	1.21	1.22 - 1.22	

Broedwaarnemingen Spizaëtus cirrhatus limnaëetus

	Datum	Broed-maand.	Legsel-grootte	Vindplaats.	Nestplaats.
29.	18-8-44	VII	1 nest-pull. (witte phase)	Tjidjoelang Pasir Maang	Durio zibethinus , 14 m hoog. ♂ in coll. Becking.
	6-6-41 (1/3 b)	V	1	Tjibadak, G.Walat desa Tjiantajan:	Nalegsel? Zie brief ddo 1-9-41. Leg: M.Partels.
	16-8-41 (2/3 b)	VII	1	Soekaboemi, Tji-kawoeng, Tjiraoenden.	Nalegsel van 17-6-41 ? Leg: M.Partels.

Broedwaarnemingen Pachycephala cinera butaloides. Jaar 1945. Buitenzorg en Omstr.

Datum.	Broed-maand.	Legsel-grootte	Vindplaats	Nestplaats.
				Jaar 1945. Buitenzorg en Omstr.
9-2-45 (z.z.b)	I	2	Plantentuin, v.Hasselt bank.N-Koepel	Litsea chrysocoma, 6 m hoog.
18-2-45 (v)	II	2	Plantentuin, O-Paleisvijver Groote weg 4 sprong.	Hydnocarpus anthelmintica, 15 m hoog.

30.

Eiermaten Pachycephala cinera butaloides.

Lengte- en breedtematen in mm			Schaalgewicht gr Slankheid		Eigewicht in gr.	
9-2-45	22,4 x 16,1	21,4 x 15,3	1,39	1,40	18-2-45 (v)	2,91 2,91
18-2-45	21,3 x 15,9	21,4 x 15,9	1,34	1,35	Schaalgewicht	
					9-2-45	0,133 0,127
					18-2-45	0,165 0,159

Figure 7

31.

Broedwaarnemingen Aethopyga siparaja heliegona. Jaar 1944. Buitenzorg en Omstr.

Datum.	Broed-maand	Legsel-grootte	Vindplaats.	Nestplaats.
25-6-44 (z.z.b.)	VI	2	Depok	Aan uitstekende wortels van kaliwand. 6 m hoog.
25-6-44 (½ b)	VI	2	Depok	Aan uitstekende wortels van kaliwand, 6 m hoog.
17-12-44 (¼b)	XII	2	N.M. Depok.	In afhangende wortels van kalikant, 3 m hoog
26-12-44 (v)	XII	2	N.M.Depok.	In afhangende wortels aan kale kaliwand, 3 m hoog. Op 17-12-44 nest klaar, vogel vloog er af.

Eiermaten Aethopyga siparaja heliegona. Oberh.

Datum legsel.	Lengte- en breedtematen in mm.		Slankheid.		Eigewicht in gr.	
25-6-44 (z.z.b.)	14,2 x 10,7	14,6 x 10,3	1,33	1,42		
25-6-44 (½ b)	15,6 x 11,0	15,4 x 10,7	1,42	1,44	25-6-44 (½b)	0,83 - 0,87
17-12-44	15,7 x 10,8	14,1 x 10,2	1,45	1,38	26-12-44 (v)	0,81 0,85
26-12-44	13,8 x 10,9	14,0 x 10,8	1,27	1,30		

Schaalgewichten	
Dep. 17-12-44	0,042 0,037
Dep. 26-12-44	0,042 0,042
Dep. 25-6-44	0,039 0,038
Dep. 25-6-44	0,032

Figure 8

with those of a *V. macropterus* egg collected no later than 1925 at an untraceable locality and measured by me before the war as 44.3 × 33.0 mm (ms. G).

The original Bartels collection is thus in effect the only collection to contain eggs of Javan Lapwing; eight clutches in total (5/1, 2/2, 1/4). Hoogerwerf's dates and locations for eggs of this species are false. To my knowledge the four-egg clutch collected by the Bartels family, labelled '12.05.1925, Rawah Tangerang, W. Java' (*cf.* also Collar *et al.* 2000) is the last clutch of this species collected by the Bartels family. Cabang Bungin (six clutches) and Rawah Tangerang (one), just east and west of present-day Jakarta, are the only known collecting localities for clutches of Javan Lapwing. The eighth clutch is probably also from either of these localities. Information to the contrary, in e.g. Collar *et al.* (2001: 1383), based on Hoogerwerf (1949a) and Hellebrekers & Hoogerwerf (1967), is incorrect.

2. **BRONZE-WINGED JACANA** *Metopidius indicus*

(*a*) Hoogerwerf (1949a: 56–57, Plate V, Fig. 43): [Examined material: seven eggs (two clutches), clutch size 3–4 eggs, no particulars on locality or collecting date, but only Central Java: April (1) and East Java: November (1)].

(*b*) Hellebrekers (1967: 33): 'Bartels: No material available'.

(*c*) Hoogerwerf (1967): '1/3; June; West Java. Measurements (3): av. 34.43 (34–34.9) × 25.3 (25.1–25.5); largest egg: 34.9 × 25.1. Weight (1/3): av. 0.729 (0.717–0.741). For two previously recorded breeding dates and seven earlier measured eggs see Hoogerwerf (1949a: 56–57, Plate V, Fig. 43)'.

(*d*) Hoogerwerf private collection: one clutch, with the label: '1/3, Tangerang W. Java, June 1936' (RMNH 75546).

Hoogerwerf (1949a) gave only very general information for the two clutches of this species, mentioning Central and East Java but no precise localities, and April and November but no precise dates, and no collectors. In 1967 he mentioned only one clutch for his own collection, this time from 'West Java'. This was probably the same clutch present in his collection when the latter was transferred to RMNH. There are marked and unexplained differences between Hoogerwerf (1949a) as opposed to the data in Hellebrekers & Hoogerwerf (1967) and Hoogerwerf's private collection.

A photostat of Hans Bartels' handwritten list of acquisitions until 1927 (ms. A) is presented in Fig. 1, no. 2. Bartels' notation '3,3' means a three-egg clutch (1/3) of which all three are present in the collection. This clutch was no longer present in the Bartels collection when Hellebrekers described it in 1967. My own measurements were 35.0 × 25.3, 34.6 × 25.5 and 34.1 × 25.5 mm (ms. G). This can be summarised as average 34.6 × 25.4 mm vs. Hoogerwerf's 34.4 × 25.3 mm; range in length 34.1–35.0 mm vs. Hoogerwerf's 34.0–34.9 mm; range in width 25.3–25.5 mm vs. Hoogerwerf's 25.1–25.5. mm; and in the Bartels clutch as in Hoogerwerf's, the egg with the greatest length had the narrowest width (35.0 × 25.3 mm vs. 34.9 × 25.1 mm). Given the lack of consistency in Hoogerwerf's own data, the identical measurements (within measurement error), and the access that Hoogerwerf had to the

Captions to figures on opposite page

Figure 7. Egg collection data in manuscripts of the Becking family concerning (28) Besra *Accipiter virgatus*, (29) Changeable Hawk-Eagle *Spizaetus cirrhatus* and (30) Mangrove Whistler *Pachycephala grisola* (= *P. cinerea*); all three from ms. H, notes concerning egg measurements, fresh weights and shell weights of eggs held in the Becking collection, by my brother R. W. Becking and myself, and by our father J.-H. Becking Sr.

Figure 8. Egg collection data in manuscripts of the Becking family concerning (31) Crimson Sunbird *Aethopyga siparaja*; from ms. H, notes concerning egg measurements, fresh weights and shell weights of eggs held in the Becking collection, by my brother R. W. Becking and myself, and by our father J.-H. Becking Sr.

Bartels collection during 1944–45, clutch RMNH 75546 of *Metopidius indicus* must be that missing from the Bartels collection, for which the data are 'Batavia near Tjabang Boengin, 20 June 1920' (Fig. 1, no. 2).

3. **CRESTED GOSHAWK** *Accipiter trivirgatus*

(*a*) Hoogerwerf (1949a: 28) [Examined material: eight eggs (four clutches). Clutch size two eggs, sometimes three. Eggs average 44.91 × 35.88 mm. Breeding months: Jan. (x), Feb. (1), Mar. (1), Dec. (1)].

(*b*) Hellebrekers (1967: 18): 'Bartels: 3/1, 5/2; Febr. (1), Apr. (2), Oct. (1), Dec. (3); W. Java. Measurements (13): av. 45.1 (42.1–49.4) × 36.4 (35.1–38.2). Weight (13): av. 2.40 (2.20–2.80)'.

(*c*) Hoogerwerf (1967): '1/2, without further particulars. Measurements (2): 44.8 × 35.44.6 × 37 [evidently a printing error]: Weight (2/2, 1/3): av. 2.460 (2.290–2.883)'.

(*d*) Hoogerwerf private collection: two clutches (2/2). One labelled in Hoogerwerf's handwriting '2 eggs, 5 Febr. 1939, Buitenzorg (= Bogor), W. Java . leg. A. Hoogerwerf', but with this clutch there is a smaller label 'Tjiawi-Poentjak, Buitenzorg' (RMNH 75484); the other without any data (RMNH 75483).

In Hans Bartels' list of eggs from 1927 (ms. A; *cf.* Fig. 1 no. 3, *Astur trivirgatus*), and in his egg measurements from 1927 (ms. C; *cf.* Fig. 1, no. 3a, *Accipiter trivirgatus*), five clutches for this species are mentioned, 1/1 and 4/2. The clutch '1/2, 20 January 1923, Tji Tamiang' is, however, missing from the Bartels collection in RMNH. The egg measurements were 45.2 × 36.7 and 44.0 × 37.1 mm.

Hoogerwerf *in* Hellebrekers & Hoogerwerf (1967) mentioned for his private collection only one clutch '1/2, without further particulars', while in his collection as given to RMNH two clutches were present. For the clutch without particulars the measurements presented are also confused (see above).

The 1/2 clutch (RMNH 75484) in Hoogerwerf's collection is not mentioned in any of his publications, although collection data are given on the label. The other clutch '1/2, without further particulars' (RMNH 75483) I measured as 45.2 × 36.7 and 44.0 × 37.1 mm, identical to the missing clutch from the Bartels collection, which I measured before the war (ms. G). Moreover, these measurements are identical to those made by Hans Bartels in 1927 in his handwriting (ms. C; *cf.* Fig. 1, no. 3a). This is the clutch '1/2, 20 January 1923, Tji Tamiang' in the original Bartels collection.

Finally, it is remarkable that Hoogerwerf (1949a), based on his private collection, mentioned 'clutch size 2 or 3 eggs and 8 eggs, 4 clutches' when these number three clutches and seven eggs. Later (1967) he also gave the *weights* of these seven eggs (2/2, 1/3): 'Weight (2/2, 1/3): av. 2.460 (2.290–2.883)', as if they were all in his collection. But, at his death, his collection only contained the 2/2 clutches.

4. **SPOTTED KESTREL** *Falco moluccensis*

(*a*) Hoogerwerf (1949a: 39, Plate III, Fig. 25: [Examined material: five eggs (two clutches); clutch size: four eggs. Egg measurements average 37.56 × 31.82 mm. Breeding months: W. Java, Mar. (1), E. Java Mar. (1)].

(*b*) Hellebrekers (1967: 23): 'Bartels: 1/3, 1/4; June, October; West Java. Measurements (7): av. 38.7 (36.9–40.7) × 32.1 (31.3–33.7). Weight 1.65 (1.57–1.71)'.

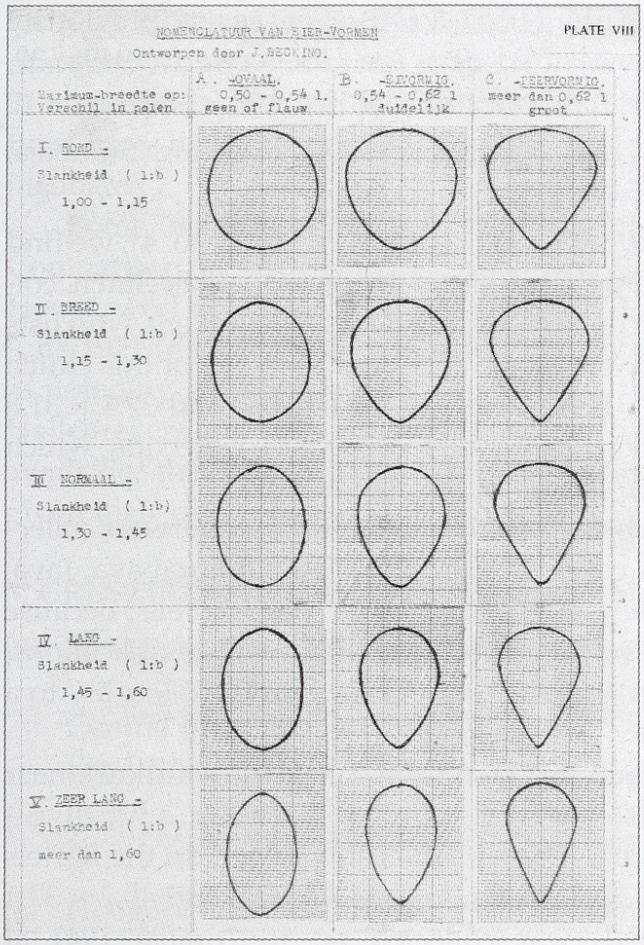


Figure 9

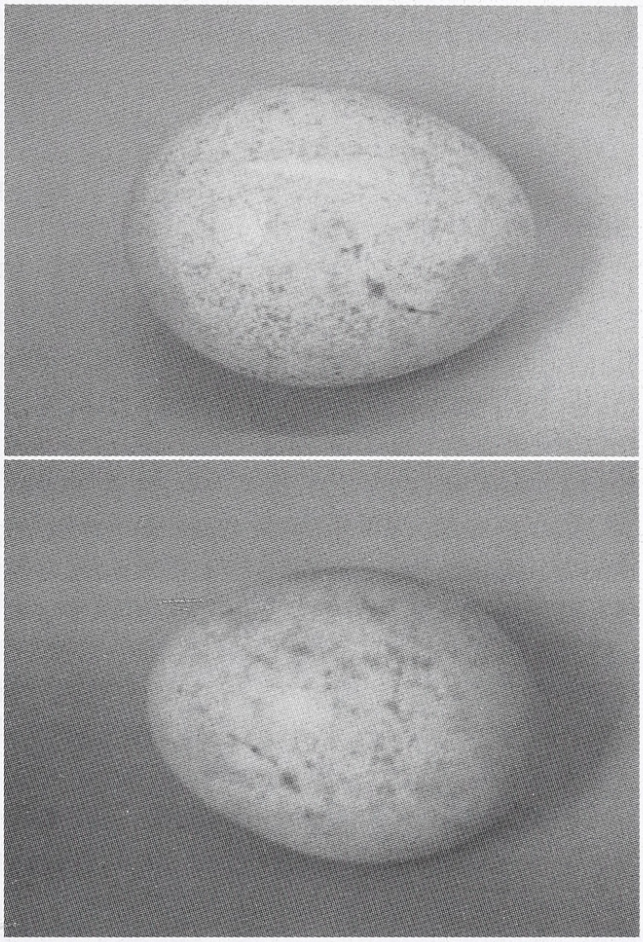


Figure 10

Figure 11

Figure 9. Egg shape nomenclature originated by J.-H. Becking before World War II, but used by Hoogerwerf without acknowledgement in Hoogerwerf (1949a). For more details see the main text.

Figure 10. Egg of Green Peafowl *Pavo muticus* (RMNH 75515) originally from the Becking collection, but which arrived at RMNH via Hoogerwerf's private collection, wherein it was labelled: 'W. Java, without date'. This egg can be individually recognised by its natural scar (top) and remnants of the original lettering of the label with red ink on the shell just above the centre of the egg (bottom), and an artificial pink wash over its surface. It was actually collected in Central Java; for further details see the text. (Jan-Hendrik Becking)

Figure 11. Nest of Mountain Tailorbird *Orthotomus cucullatus* exclusively composed of dry rattan leaves, placed in the fork of a small subcanopy tree, 1 m above ground, at Lake Situ Lembang (2,500 m), above Bandung, West Java, 21 July 1940; the nest contained two fresh eggs (H. La Bastide)

(*c*) Hoogerwerf (1976): 'Weight (1/4): av. 1.614 (1.551–1.675). For seven previously recorded breeding dates and five earlier measured eggs see Hoogerwerf (1949a: 39, Plate III, Fig. 25).'

(*d*) Hoogerwerf private collection: one clutch (1/4), labelled in his handwriting 'Surabaja, Java, 1937, leg. A. Hoogerwerf' (RMNH 75497).

In Hans Bartels' handwritten list of acquisitions to 1927 (ms. A; *cf.* Fig. 2, no. 4), we find *Falco occidentalis*: [(1/4) Pangrango, dated 25 May 1921, slightly incubated.]. This clutch, collected in May, is missing from the Bartels collection as described by Hellebrekers, who lists June and October as months for the two clutches present. The measurements of this clutch taken by Hans Bartels in 1927 (ms. C)—37.1 × 31.8, 37.9 × 32.1, 36.7 × 31.7 and 37.4 × 31.8 mm (*cf.* Fig. 2, no. 4a)—are identical to those of the clutch in Hoogerwerf's collection, which I measured as 37.0 × 31.7, 37.9 × 32.1, 36.9 × 31.7 and 37.5 × 31.8 mm.

Once again, all evidence points to the clutch of *F. moluccensis* in the Hoogerwerf collection belonging to the Bartels collection. It was collected not 'May, 1937 at Surabaya, Java, leg. A. Hoogerwerf', but '25 May 1921 at Mt Pangrango (Pasir Datar), leg. Bartels'. Because the clutch appears as the 'E. Java, May clutch' in Hoogerwerf's collection and publications, this not only represents a change of ownership and date but also a transfer of locality to a completely different part of Java, *c.*700 km away.

A third clutch collected by the Bartels family is (1/4) from Tjoekoel (= Cukul), near Bandung, on 18 October 1929 (ms. E,a). It is also referred to in Max Bartels Jr.'s handwritten notebook (ms. E,b; *cf.* Fig. 3, no. 6b, last entry). This clutch is still present in the Bartels collection (RMNH 38864) and measures 37.1 × 33.7, 37.4 × 33.7, 38.7 × 32.0 and 40.2 × 32.1 mm. A fourth clutch (1/4, slightly incubated) was collected on 10 August 1941 at Tjibatununggul, West Java, by Max Bartels Jr. (ms. D), but is now missing from the Bartels collection, its fate unknown.

5. **ORIENTAL HOBBY** *Falco severus*

(*a*) Hoogerwerf (1949a: 38): [Examined material: five eggs (two clutches). Clutch size: four eggs. Egg measurements average 37.16 × 32.08 mm, length variation: 35.0–40.0 mm, breadth variation: 30.80–33.70 mm, longest egg 40.0 × 33.70 mm, broadest egg 40.0 × 33.70 mm. Both clutches were found in June in West Java.]

(*b*) Hellebrekers (1967: 23): 'Bartels: 4/2, 1/3; April (2), May (3); West Java. Measurements (11): av. 38.9 (37.5–40.5) × 32 (31.4–32.3). Weight (11): av. 1.66 (1.60–1.77)'.

(*c*) Hoogerwerf (1967): 'Weight (1/4): av. 1.370 (1.339–1.417). For one previously recorded breeding date and five earlier measured eggs see Hoogerwerf (1949: 38–39)'.

(*d*) Hoogerwerf private collection: one four-egg clutch lacking locality and date (RMNH 75496).

Again, the lack of collection information accompanying the clutch in Hoogerwerf's collection (1949a), and in his 1967 description of that collection, is remarkable. His collection received by RMNH did not give information on date and locality, although in his 1949a publication it is mentioned that he has two clutches both found in June in West Java.

In Hans Bartels' handwritten list of acquisitions until 1927 (ms. A) six clutches of *F. severus* are listed (*cf.* Fig. 2, no. 5), not just the five that were present when Hellebrekers described the collection. For four clutches Hans Bartels also took the egg measurements (ms. C), but not for the four-egg clutch collected on 5 April 1927 (*cf.* Fig. 2, no. 5, sixth entry). The same four-egg clutch is missing from the Bartels collection at RMNH. In Hoogerwerf's collection there is a four-egg clutch (RMNH 75496) with no locality or date. I measured the

four-egg clutch in the Bartels collection as 36.3 × 32.0, 37.3 × 31.9, 34.9 × 31.8 and 36.8 × 31.0 mm (ms. G), and the clutch in the Hoogerwerf collection as 36.2 × 31.9, 37.3 × 32.0, 35.0 × 31.8 and 36.9 × 30.8. All this indicates that RMNH 75496 was taken from the Bartels collection, for which the original data are '1/4, collected at Pangerango on 5.4.1927, slightly incubated'.

Some manipulation of the remaining clutches has apparently also taken place. Comparison of Hans Bartels' data (Fig. 2, no. 5) with Hellebrekers *in* Hellebrekers & Hoogerwerf (1967) shows that the original single egg taken from a three-egg clutch on 6 June 1921 (r means rot, i.e. putrid; which nest contained also 2 downy pulli), 2/2 and 2/3 as noted by Hans Bartels, 11 eggs in total, became 4/2 and 1/3 (also 11 eggs) according to Hellebrekers. As the measurements and data for all the eggs taken by Hans Bartels are available, the five clutches can probably be restored to their original compositions and given their true collection information.

6. **CRESTED SERPENT EAGLE** *Spilornis cheela*

(*a*) Hoogerwerf (1949a: 35): [Examined material; seven eggs (seven clutches). Clutch size one, sometimes two. Average measurements 62.71 × 49.77 mm (7); breeding months Central Java: Feb. (1), Apr. (1), Jun. (2), Jul. (1), Aug. (1).] Eggs are depicted in Plate II, Fig. 21 and Plate III, Fig. 22.

(*b*) Hellebrekers (1967: 21): 'Bartels: 3/1; February (2), March (1); W. Java. Measurements (3); av. 61.3 (59.6–63.1) × 49.7 (48.1–51.6). Weight (3): av. 6.30 (5.75–6.65)'.

(*c*) Hoogerwerf (1967): 'Weight (3/1): av. 6.667 (6.038–7.005). For ten previously recorded breeding dates and seven earlier measured eggs see Hoogerwerf (1949a: 35, Plate III, Figs. 21, 22)'. (This cross-reference is incorrect: it should be Plate II, Fig. 21 and Plate III, Fig. 22; see above.)

(*d*) Hoogerwerf private collection: three clutches of 1/1, including RMNH 75492, 75493 and 75494.

Two of these three eggs in Hoogerwerf's collection I recognised immediately as originating from the Bartels collection. Egg RMNH 75494 is remarkable in being rather large and broad, and having characteristic bold blotches at its smaller end. This means it can easily be individually identified, as *S. cheela* eggs are almost always unmarked plain white. This egg is depicted by Hoogerwerf (1949a, Plate III, Fig. 22). A similar, large and rather broad, boldly blotched *Spilornis* egg, collected 17 March 1907 (ms. A; *cf.* Fig. 2, no. 6, first entry, *Spilornis bacha*), is missing from the Bartels collection in RMNH. I examined this egg before the war and my measurements of 62.1 × 49.0 mm (ms. G) are identical to those of RMNH 75494 in the Hoogerwerf collection (62.1 × 48.9 mm). In contrast to the data given by Hoogerwerf in his collection, 'February 1943, N0.222,1/1' and formerly asserted to be collected in 'Central Java' (Hoogerwerf 1949a), the real data are: 'Mt. Pangrango, W. Java, 17 March 1907, 1 egg, zw. bebr. [= hard set]' (ms. A; Fig. 2, no. 6, first entry).

Egg RMNH 75492 is most remarkable, and therefore individually identifiable, by its very large size, 71.0 × 52.2 mm. It was labelled by Hoogerwerf only 'W. Java', without any date and no precise locality, although Hoogerwerf (1949a) indicated that all his seven eggs were from Central Java. This egg is also from the Bartels collection, taken according to Max Bartels Jr.'s acquisition list of 1933 on '9 Febr. 1933' at 'Tjiparay (Tjibogo), W. Java', and mentioned by him as 'groot' [=large] in the margin of his notebook page under *Spilornis bido* (ms. E,b; *cf.* Fig. 3, no. 6b, second entry). I measured it before the war as 71.0 × 52.3 mm (ms. G).

Another *Spilornis bido* egg mentioned by Bartels in his 1933 list (ms. E,a; *cf.* Fig. 2, no. 6a, final entry), collected 13 February 1933 and also referred to in his notebook (*cf.* Fig. 3, no. 6b, fourth entry), is also plain and unmarked. It was exceptionally small for a *Spilornis* egg and hence noted by Bartels as 'klein' (= small) in the margin of his notebook. It measured 61.5 × 52.3 mm (ms. G) and has the original label 'Tjiparay (Tjibajawak), (W. Java), 13 Febr. 1933'. This egg is still present in the Bartels collection (RMNH 38819).

7. **JAVAN OWLET** *Glaucidium castanopterum*

(*a*) Hoogerwerf (1949a: 102): [Examined material: two eggs, (one clutch) no particulars given; breeding season: W. Java, March (1). Both examined eggs ex. coll. Bouma].

(*b*) Hellebrekers (1967: 59): 'Bartels: 4/2; February (2), March (1), April (1); Tji Karang and Rawa Kalong (both in the Preanger district), West Java. Measurements (8): av. 33.5 (31.5–34.7) × 29.5 (28.6–30.0). Weight (8): av. 1.09 (0.90–1.22)'.

(*c*) Hoogerwerf (1967): 'Weight (1/2) 1.032, 1.051. For one previously recorded breeding date and the measurements of both of these eggs originating from Gundih, near Semarang, Central Java, see Hoogerwerf (1949: 102). This owl is very rare in Java'.

(*d*) Hoogerwerf private collection: 1/2 clutch, labelled 'West Java, No. 229, March', with no further details (RMNH 75696).

Hoogerwerf (1949a) implied that the clutch he referred to was from the Bouma collection and was collected in West Java. In Hellebrekers & Hoogerwerf (1967), Hoogerwerf explicitly referred to the same eggs. This time he stated that they were from Gundih, Central Java, but still implied that they were his own, as he did not mention the Bouma collection. In Hoogerwerf's collection now at RMNH there is again the reference to 'W. Java', but without any further detail as to the origin of the clutch.

At the same time Hellebrekers made no mention of the clutch noted by Hans Bartels as having been collected at Mt. Masigit (*cf.* Fig. 3, no. 7, first entry). I measured that clutch before the war as 32.3 × 28.9 and 32.4 × 28.5 mm (ms. G). The clutch in the Hoogerwerf collection at RMNH has identical measurements, 32.3 × 29.0 and 32.3 × 28.5. I therefore believe that RMNH 75696 is the clutch collected by H. Bartels at 'Mt. Masigit, W. Java on 4 March 1927, 2 eggs, slightly incubated'.

8. **ORANGE-BREASTED TROGON** *Harpactes oreskios*

(*a*) Hoogerwerf (1949a: 113): [Examined material: four eggs, 2/2. Clutch size two eggs, breeding months: February (x), June (x), October (x)]. Eggs figured in Plate X, Fig. 114.

(*b*) Hellebrekers (1967: 66): 'Bartels 3/2; May, June, October; W. Java. Measurements (6): av. 26.7 (25.0–29.0) × 21.7 (21.4–22.3). Weight (6): av. 0.44 (0.40–0.50)'.

(*c*) Hoogerwerf (1967): 'Weight 2/2: av. 0.441 (0.405–0.485); maximal variation in the same clutch: 0.080 (0.405–0.485). For three previously recorded breeding dates and measurements of these four eggs originating from Mount Pangerango and Mount Salak, West Java, see Hoogerwerf (1949a: 113, Plate X, Fig. 114)'.

(*d*) Hoogerwerf private collection: 2/2: one labelled by Hoogerwerf 'W. Java, (Tjibodas?), June, eggmark 2' (RMNH 75710), the other 'W. Java, (Tjibodas?), October, eggmark 1' (RMNH 75711).

Again, the lack of consistency between Hoogerwerf's publications (two clutches in 1949a without a locality, and in 1967 'from Mount Pangrango and Mount Salak') and his private collection (two clutches from 'Tjibodas?') is remarkable.

In Hans Bartels' handwritten list of acquisitions to 1927 (ms. A), there are four two-egg clutches (Fig. 3, no. 8) and not three as stated by Hellebrekers in 1967. I took measurements of all the eggs concerned before the war (ms. G), as well as of the eggs from Hoogerwerf's collection at RMNH. Those of Hoogerwerf's June clutch from 'Tjibodas?', 28.6 × 22.7 and 28.6 × 22.2 mm (RMNH 75710), agree with those of Bartels' '10 June 1923 clutch from Tjireunden', 28.6 × 22.6 and 28.5 × 22.2 (Fig. 3, no. 8, fourth entry). Those of Hoogerwerf's October clutch from 'Tjibodas?', 26.9 × 21.0 and 26.9 × 20.9 mm (RMNH 75711), agree with those (26.9 × 21.0 and 26.9 × 20.9 mm) of the clutch collected by Max Bartels Jr. in October 1934 on the lower slopes of Mt. Pangrango. This latter clutch was not in the Bartels collection as described by Hellebrekers (1967), nor, having been collected in October 1934 was it registered in Hans Bartels' list (ms. A) from 1927. It is, however, clearly the true origin of RMNH 75711.

9. **WHITE-BELLIED WOODPECKER** *Dryocopus javensis*

(*a*) Hoogerwerf (1949a: 134): [Examined material: one egg, clutch size: Bartels: three eggs. Measurements of the above-mentioned egg: 31.80 × 24.40 mm. Breeding months: E. Java September (1); Bartels W. Java August (x)].

(*b*) Hellebrekers (1967: 78): 'Bartels: No material available'.

(*c*) Hoogerwerf (1967): 'Weight (1/1): 0.847. For two previously recorded breeding dates and the measurements of this egg originating from the Houwing collection, see Hoogerwerf (1949a: 134)'.

(*d*) Hoogerwerf private collection: one egg, labelled '1/1, East Java, September (no year), leg. A. Hoogerwerf' (RMNH 75743). In the egg box a note in Hoogerwerf's handwriting reads 'laid in captivity'.

Combining the above information, the single egg of this large woodpecker, mentioned in all three Hoogerwerf publications, came from the Houwing collection and was laid in captivity. J. Houwing lived as planter on the north coast of West Java near Subang and never collected in East Java, so why did Hoogerwerf indirectly link the East Java egg (Hoogerwerf 1949a) with Houwing (Hoogerwerf 1967)? The information in Hoogerwerf (1949a) shows that Hoogerwerf must at least have seen the Bartels' original label for this species, because he mentioned a complete clutch of three eggs. Hoogerwerf again gave neither precise collection date nor locality, which is remarkable for a species so rare on Java.

Ernst Bartels collected a three-egg clutch on 23 September 1927, at the Kole Beres Tea Estate, Mt. Patuha, West Java. There were originally three eggs, but he dispatched them unblown by ordinary mail to his brother Hans in Pasir Datar and only one survived the transport. Hans entered the acquisition (ms. B; *cf.* Fig. 3, no. 9, second entry). He measured the surviving egg as '32.0 × 24.6 mm' and mentioned it under the name *Thriponax* on 16 October 1927 to his brother Max, nicknamed Bango (the Indonesian name for Lesser Adjutant *Leptoptilos javanicus*), in Bern (ms. C; *cf.* Fig. 3, no. 9a) with the remark 'andere eggs lapoer!' ['other eggs broken!']. Ernst Bartels described this discovery (Bartels 1931: 329).

Hoogerwerf (1949a) stated the egg in his collection to be 31.80 × 24.40 mm, which is within a measurement error of 0.2 mm the same as for Ernst Bartels' egg. At the same time, Hellebrekers in 1967 stated that there was no material of this species present in the Bartels collection. Given these facts, there is, in my view, no doubt that the egg from the Hoogerwerf collection is in fact the sole surviving egg from the three-egg clutch collected by E. Bartels. Hoogerwerf's notation 'laid in captivity' is therefore untrue. The implication that this species breeds in East Java is also unsupported. The egg remains the only one of this species from Java.

10. **RUFOUS WOODPECKER** *Celeus brachyurus*

(*a*) Hoogerwerf (1949a: 130): [Examined material three eggs, clutch size three, average 25.67 × 20.0 mm, length variation 25.20–26.50; breadth variation 19.70–20.30; longest egg 26.50 × 19.70; broadest egg 25.30 × 20.30. Breeding months West Java: April (x) and September (1)]. Plate XI, Fig. 126. No locality or collecting date(s) given.

(*b*) Hellebrekers (1967: 75): 'Bartels collection: no material available'.

(*c*) Hoogerwerf (1967): 'One egg, weight 0.310 g. For two previous recorded breeding dates and three earlier measured eggs see Hoogerwerf (1949a: 130, Plate XI, Fig. 126); this woodpecker is rare in Java'.

(*d*) Hoogerwerf private collection: no material.

Hoogerwerf (1949a) gives neither collecting date nor locality for the clutch of three eggs (1/3) in his collection. In 1967 he implied that he possessed only one egg, but none was present when his collection was acquired by RMNH.

In Hans Bartels' handwritten list of acquisitions to 1927 (ms. A), a three-egg clutch is entered under *Micropternus brachyurus*, collected on '02.09.1919, Tji-Londong, Preanger, W. Java' (*cf.* Fig. 4, no. 10). The eggs were '1. bebr.' [slightly incubated]), hence a 'full clutch'. The measurements I took before the war (26.5 × 19.7, 25.3 × 20.3 and 25.2 × 20.0 mm) are practically identical to those mentioned by Hoogerwerf (1949a) (ms. G), and Hellebrekers stated that the species was not represented in the Bartels collection in 1967.

I have no doubt that the clutch described by Hoogerwerf (1949a) is indeed the clutch missing from the Bartels collection. The single egg weight mentioned by Hoogerwerf (1967) probably also came from this clutch. In my earlier attempts to get the present paper published I mentioned these conclusions. I suspect that in response to my earlier manuscript, which he saw, Hoogerwerf destroyed the clutch in order to remove any evidence of its origin.

11. **BANDED BROADBILL** *Eurylaimus javanicus*

(*a*) Hoogerwerf (1949a: 136): [To me the eggs of this species are unknown.]

(*b*) Hellebrekers (1967: 79): 'Bartels: 1/2, 1/3; April, December; Mount Massigit and Mount Pangerango, West Java. Measurements (5): av. 28 (27.6–29) × 21.2 (20.7–22.2). Weight (5): av. 0.300 (rather large holes) and 0.375'.

(*c*) Hoogerwerf (1967): '1/2; June; Mount Salak, West Java. Measurements: 31.2 × 20.2, 31.5 × 20.1. Weight (2): 0.364, 0.391. Not previously recorded by me. For some earlier particulars derived from literature see Hoogerwerf (1949a: 136). The species is rare in Java'.

(*d*) Hoogerwerf private collection: no material present.

Hoogerwerf in 1949 did not know the eggs of this species, but in 1967 he claimed to possess a two-egg clutch; yet when his private collection was acquired by RMNH in 1977 no eggs were present.

In Hans Bartels' handwritten list of acquisitions to 1927 (ms. A), two two-egg clutches and one three-egg clutch are entered (*cf.* Fig. 4, no. 11). Hellebrekers, however, mentions only single two- and three-egg clutches as present in the Bartels collection in 1967. Hoogerwerf's 1967 measurements for the two-egg clutch in his collection (see above) are exactly the same (31.2 × 20.2 and 31.5 × 20.1 mm) as mine from 1940 at the home of Max Bartels Jr. for a two-egg clutch from Mt. Masigit collected by Hans Bartels on 6 June 1922

(ms. G). In my opinion Hoogerwerf's clutch is that taken by Bartels. Hoogerwerf may have destroyed this clutch, too, to remove evidence of its theft.

12. **WREATHED HORNBILL** *Rhyticeros undulatus*

(*a*) Hoogerwerf (1949a): [To me the eggs of this species are unknown.]

(*b*) Hellebrekers (1967): not mentioned.

(*c*) Hoogerwerf (1967): not mentioned.

(*d*) Hoogerwerf private collection: not present.

In Max Bartels Jr.'s daily egg acquisition list for 1940–42 (ms. D) mention is made of three clutches: (a) '09.08.1941: 2 eggs slightly incubated, Cikuda, Cisarakan'; (b) '10.08.1941, 1 egg fresh, Citapeu, Mt. Rompang'; (c) '23.08.1941, 2 eggs hard set, Ciseureuh, Cibutun' (*cf.* Fig. 4, no. 12, entries 4, 6 and 12, indicated by arrows). All these clutches, from a species of which only a very few clutches were ever collected, disappeared from the Bartels collection. As with clutches of other rare species mentioned above, Hoogerwerf may have first taken these clutches for his own collection, and then destroyed them following my manuscript of 1969; see Discussion. The clutches of the commoner species collected by Max Bartels Jr. in 1940–42 are, however, all still in the Bartels collection in RMNH.

13. **LARGE WOOD SHRIKE** *Tephrodornis gularis*

(*a*) Hoogerwerf (1949a: 143): [To me the eggs of this species are unknown.]

(*b*) Hellebrekers (1967: 83): 'Bartels collection: 1/2, March, Mount Massigit, Preanger, W. Java; measurements (2): 21.6 × 15.7 and 21.9 × 16.5. Weight (2) av. 0.16'.

(*c*) Hoogerwerf (1967): '1/2, March, Mount Salak (near Bogor), W. Java. Measurements: 21.4 × 15.6 and 21.7 × 16.4. For some previous published particulars see Hoogerwerf (1949a: 143). This species is not common in Java'. No weight is given.

(*d*) Hoogerwerf private collection: no eggs of this species.

It is remarkable (1) that Hoogerwerf stated in 1949 that he did not know the eggs of this species, (2) that after leaving Indonesia he claimed to possess a clutch of two in his own collection, without giving a collection date, and (3) that the clutch was not present when his collection was acquired by RMNH ten years later. At the same time the measurements given by Hoogerwerf for his own clutch are, within an error of 1%, identical to those given by Hellebrekers for the clutch in the Bartels collection. The entry for this species in Hans Bartels' egg list (ms. A) appears in Fig. 4, no. 13, under *Tephrodornis virgatus*. I described this clutch before the war, and measured the two eggs as 21.5 × 15.6 mm (0.153 g) and 21.8 × 16.5 mm (0.167 g), averaging 0.160 g (ms. G). In my opinion all three sets of measurements refer to the same clutch, collected by H. Bartels on 18 March 1923 at Mt. Masigit and even now present in the Bartels collection (RMNH 39474). Apparently Hoogerwerf (1967) faked possession of a clutch of *T. gularis*, hence its absence from the Hoogerwerf collection on arrival at RMNH in April 1977. Large Wood Shrike is rather rare on Java and its small nests are very hard to find. The Bartels clutch was unique for Java and possibly the entire Indo-Australian region, excluding India (Ali & Ripley 1971).

14. **SCALY THRUSH** *Zoothera dauma*

(*a*) Hoogerwerf (1949a: 177): [Examined material: four eggs (two clutches). Clutch size: two eggs. Measurements: average 31.20 × 22.70 mm; length variation: 28.80–33.70, breadth

variation: 22.40–23.30; longest egg 33.70 × 22.50; broadest egg: 33.0 × 23.30 mm. Breeding months Jan. (1), June (1); Plate XIV, Fig. 190].

(*b*) Hellebrekers (1967: 105): 'Bartels: 1/1, 3/2; September (3), November (1); West Java. Measurements (7): av. 34.4 (32.8–36.5) × 22.8 (22.1–23.6). Weight (7): av. 0.45 (0.39–0.51)'.

(*c*) Hoogerwerf (1967): 'Weight (2/2): av. 0.433 (0.417–0.446); maximal variation in the same clutch: 0.029 (0.417–0.446). For two previously recorded breeding dates and the measurements of these four eggs see Hoogerwerf (1949a: 177, Plate XIV, Fig. 190)'.

(*d*) Hoogerwerf private collection: '2 eggs, W. Java (no locality, no date)' (RMNH 76012), and '2 eggs, Mt. Salak, Tjiapoes, W. Java, 15 June 1940' (RMNH 76013).

In Hoogerwerf (1949a) and Hoogerwerf (1967) no precise dates, only months, and no localities are given for the two clutches that Hoogerwerf implied were from his own collection. When his collection came to RMNH in April 1977, a date and locality were included for one clutch (RMNH 76013), and an approximate locality and no date for the other (RMNH 76012). These represent remarkable inconsistencies in Hoogerwerf's own accounts.

In Hans Bartels' handwritten list of clutches to 1927 (ms. A), a one-egg and three two-egg clutches are entered under *Oreocichla horsfieldi* (*cf.* Fig. 4, no. 14). At least one additional two-egg clutch was added to the Bartels collection subsequently as evident from the acquisition lists of Max Bartels Jr. (ms. D). A clutch collected on 13 June 1918 (ms. A; Fig. 4, no. 14, first entry) was not present in the Bartels collection as described by Hellebrekers, and Hellebrekers does not mention June as a breeding month. I measured this clutch before the war as 33.8 × 22.5 and 33.1 × 23.4 mm (ms. G). These measurements are identical to ones I have recently taken of Hoogerwerf's Mt. Salak clutch (RMNH 76013). I therefore believe that RMNH 76013 was collected at Mt. Gede on 13 June 1918.

The clutch mentioned in Fig. 3 (no. 6b, first entry), derived from E,b, under the name '*Oreocichla horsfieldi* [= *Zoothera dauma*], 1/2, Mt. Gede, 13 Nov. 1932', however, is still in the Bartels collection (RMNH 40315).

15. **SPOTTED CROCIAS** *Crocias albonotatus*

(*a*) Hoogerwerf (1949a: 196): under *C. guttatus* [Examined material: two eggs. Clutch size two eggs. Measurements of both eggs: 24.60 × 18.0 and 24.90 × 17.60 mm. Breeding months March (x), December (1), Plate XV, Fig. 214].

(*b*) Hellebrekers (1967: 117): 'Bartels: 2/1, 3/2; April (2), May (2), June (1); W. Java. Measurements (8); av. 23.8 (22.4–25.6) × 17.7 (16.9–18.1). Weight (7): av. 0.20 (0.19–0.22)'.

(*c*) Hoogerwerf (1967): '1/2; March; West Java. Measurements: 23.2 × 18.2, 23.9 × 18.1. Weight (2/2): av. 0.227 (0.210–0.242); maximal variation in the same clutch: 0.013 (0.210–0.223). For two previously recorded breeding dates and two earlier measured eggs see Hoogerwerf (1949a: 196, Plate XV, Fig. 214)'.

(*d*) Hoogerwerf private collection: 'Tjibodas, W. Java' (RMNH 76238) and 'Tjibodas, March' (RMNH 76239).

Hoogerwerf (1949a) mentioned two eggs without locality, and in 1967 a two-egg clutch also collected by him, without details of locality and no exact date (only March). In his collection at RMNH there are two two-egg clutches, both undated but with the locality 'Tjibodas'.

In Hans Bartels' handwritten list until 1927 (ms. A), a single one-egg and three two-egg clutches are entered under *Laniellus leucogrammicus* (*cf.* Fig. 5, no. 15). Other clutches were

subsequently added and in the Bartels collection at RMNH five clutches are mentioned (2/1, 3/2). The second clutch (1/2) in the series reported by Hans Bartels (ms. A), collected on 29 March 1921, is missing, but the others are still present. I measured the missing clutch before the war as 24.0 × 18.2 and 23.3 × 18.3 mm (ms. G), which is within 0.2 mm of the measurements of Hoogerwerf's 'Tjibodas, March' clutch (RMNH 76239). Hoogerwerf's clutch from 'Tjibodas, March' therefore does not come from the north-east side (i.e. 'Tjibodas') of Mt. Pangerango but from the south-west side (Pasir Datar), where Max Bartels Sr. lived and did most of his collecting. The data for this clutch are '29 March 1921, 2 eggs (1/2), 1. bebr. [slightly incubated]'.

16. **YELLOW-BELLIED WARBLER** *Abroscopus superciliaris*

(*a*) Hoogerwerf (1949a: 210, Plate XVII, Fig. 238): under *Seicercus superciliaris vordermani* [Examined: three eggs (one clutch). Clutch size: three eggs. Measurements: av. 14.40 × 11.50, length variation 14.30–14.50, breadth variation 11.40–11.50, longest egg 14.50 × 11.50, broadest egg 14.50 × 11.50. This clutch was found in W. Java in October].

(*b*) Hellebrekers (1967: 126): 'Bartels: no material available'.

(*c*) Hoogerwerf (1967): 'Weight (1/3) av. 0.049 g (0.048–0.049 g). For one previously recorded breeding date and measurements of the three eggs see Hoogerwerf (1949: 210, Plate XVII, Fig. 238)'.

(*d*) Hoogerwerf private collection: No material present.

Hoogerwerf implied in 1967 that his 1949a clutch was still present in his private collection, because he measured its weights, but it had vanished by 1977. Of this clutch Hoogerwerf elsewhere (Hoogerwerf 1950a: 110–111, under *Seicercus superciliaris vordermani*), in Dutch, mentioned that the nest was obtained above Tjiomas estate, on the lower slope of Mt. Salak, at *c.*800 m, i.e. near his own house. He also stated that the nest was found in a clump of bamboo, resting on a bamboo stump.

Hellebrekers stated that there was no material in the Bartels collection in RMNH. However, in Max Bartels Jr.'s acquisition list (ms. D) there is an entry, '*Abrosc. superc.*' collected '20 October 1940, 3 eggs slightly incubated' (*cf.* Fig. 5, no. 16, eighth entry, indicated by an arrow). At the time Max Bartels Jr. wrote to me 'The nest was found in a *hole of an internal node* of a cut-off bamboo stem in a bamboo forest at approx. 1000 m a.s.1. near Ciparay, Mt. Pangrango' (ms. F). The measurements I took for this clutch soon after were 14.5 × 11.4, 14.3 × 11.4 and 14.4 × 11.5 mm) (ms. G), almost identical to those presented by Hoogerwerf for his clutch. As I was personally involved in the discovery, there exists an extensive correspondence (ms. F) between Max Bartels Jr. and myself about this finding. The clutch represented the first nesting record for Java in *c.*50 years of egg collecting by the Bartels family, although the species is locally not particularly rare.

In my opinion the clutch in Hoogerwerf's collection was stolen by him from the Bartels collection, and his nesting site description is incorrect. In my earlier manuscript I accused Hoogerwerf of having taken this clutch, and it seems likely that he then destroyed the eggs so that it could not be used as evidence against him.

17. **CRIMSON-BREASTED FLOWERPECKER** *Prionochilus percussus*

(*a*) Hoogerwerf (1949a: 232): under *Anaimos p. percussus* [To me the eggs of this species are unknown].

(*b*) Hellebrekers (1967: 138–139): 'Bartels: 1/1, 1/2; April; Tji Kahuripan, Preanger, West Java. Measurements (3): av. 16.4 × 11.6. Weight (3): av. 0.060'.

(*c*) Hoogerwerf (1967): '1/2; April; W. Java. Measurements: 15.7 × 11.3, 15.8 × 11.3. Not previously recorded from Java; the species is perhaps fairly rare in this island'.

(*d*) Hoogerwerf private collection: no material present.

This is a rather rare and very local species. It is strange that Hoogerwerf (1949a) claimed not to know its eggs, but in 1967 had a clutch (1/2) collected by himself, yet that by 1977 his private collection contained no examples of this species' eggs. Moreover, Hoogerwerf did not give a precise date or the locality where he obtained this clutch. Finally, although he later weighed all the eggs and clutches of his collection in the Netherlands, the weights of this clutch were not included.

In my opinion Hoogerwerf's clutch never existed. He had seen the clutch in the Bartels collection, or he copied his (1967) egg description from Hellebrekers, 'brownish primary points and speckles, forming an almost closed zone around the larger end'. I think that he invented the egg measurements, perhaps in order to make his collection appear more important.

The Bouma collection

18. **ASIAN PIED HORNBILL** *Anthracoceros albirostris*

(*a*) Hoogerwerf (1949a: 122, Plate XI, Fig. 121): under *A. malabaricus convexus* [Examined material: two eggs (one clutch). Clutch size two eggs. Measurements: av. 51.95 × 33.90 mm, length variation 51.80–52.10, breadth variation 33.70–34.10, longest egg 52.10 × 33.70, broadest egg 51.80 × 34.10. The above-mentioned clutch was collected in Central Java in November. The two above-mentioned examined eggs of this species are ex collection Bouma].

(*b*) Hellebrekers (1967: 71): 'Bartels: No material available'.

(*c*) Hoogerwerf (1967): 'Weight (1): 2.938. For one previously recorded breeding date and two earlier measured eggs see Hoogerwerf (1949: 122, Plate XI, Fig. 121)'.

(*d*) Hoogerwerf private collection: '2 eggs, Gundih, Java, 11.11.1936, A. Hoogerwerf' (RMNH 75722).

Note that in Hoogerwerf's private collection, as opposed to Hoogerwerf (1949a), there was no longer any mention of this clutch originating from the Bouma collection. This clutch, unique for Java, was collected by P. J. Bouma and later presented to Max Bartels Jr. for incorporation into the Bartels collection (see The egg collections involved). My measurements of this clutch while still in the Bartels collection, 51.9 × 34.1 and 52.1 × 33.9 mm (ms. G), are almost identical to those by Hoogerwerf. He must have moved this clutch from the Bartels collection to his own whilst both the Bartels and Bouma collections were accessible to him at the Bogor museum.

Some other clutches from the Bouma collection appropriated by Hoogerwerf

All clutches in Hoogerwerf's private collection with the locality Gundih, Central Java, are in fact Bouma's material. There is no evidence that Hoogerwerf ever collected in Gundih, other than the many clutches labelled 'Gundih' in his private collection. In addition to the above-mentioned two-egg clutch of *Anthracoceros albirostris* the following examples can be given. A large number of other clutches in Hoogerwerf's collection, taken at Gundih in the year 1936, but with no locality recorded, clearly also derive from the Bouma collection.

There were in Hoogerwerf's collection at the time of his death many clutches labelled 'Gundih', all of rarer species. Gundih was Bouma's principal collection locality. It is highly unlikely that Hoogerwerf collected in Gundih in e.g. March, April, May and November

1936 (see below) while living in Bogor. Hoogerwerf must have taken the many clutches missing from the Bouma collection (see above), and incorporated them into his own without indicating that they had been collected by Bouma. RMNH thus registered them as having been collected by Hoogerwerf.

19. **BLACK-THIGHED FALCONET** *Microhierax fringillaris*: Gundih, Central Java, 1/4, 9 November 1936 (RMNH 75495).

20. **RED-LEGGED CRAKE** *Rallus fasciata*: Gundih, Central Java, 1/4, 1936 (RMNH 75541).

21. **DRONGO CUCKOO** *Surniculus lugubris*: Gundih, Central Java, eggs with Horsfield's Babbler *Trichastoma sepiarium*, 29 November 1935 (RMNH 75680) and 20 April 1936 (RMNH 75681).

22. **HOODED PITTA** *Pitta sordida*: Gundih, Central Java, three clutches: 1/5, 20 March 1936; 1/3, 25 March 1936; 1/5, 6 April 1936 (RMNH 75744–46).

23. **BLACK-HEADED BULBUL** *Pycnonotus atriceps*: Gundih, Central Java, four clutches: 1/2, 26 March 1936; 1/2, 11 April 1936; 1/2, 21 April 1936; 1/3, 20 May 1936 (RMNH 76567–70).

24. **BLACK-NAPED MONARCH** *Hypothymis azurea*: Gundih, Central Java, two clutches: 1/2, 10 March 1936; and 1/2, 24 March 1936 (RMNH 76380–81).

The above list is far from exhaustive. It concerns examples where collection details were fortunately not changed by Hoogerwerf, other than that he implied having collected the clutches himself. I do not know whether Hoogerwerf also changed the collection details of eggs in the Bouma collection, as he did with clutches from the Bartels collection, because I did not measure the eggs of the Bouma collection.

The Becking collection

The following data are notes, egg measurements, fresh egg and eggshell weights from the private Becking collection (ms. H). I mentioned these data in my manuscript of 1969 commenting on Hellebrekers & Hoogerwerf (1967). All these clutches disappeared from the Becking collection while it was stored at the Bogor museum during and shortly after the Pacific War (as described in my draft publication).

25. **GREEN PEAFOWL** *Pavo muticus*

(*a*) Hoogerwerf (1949a: 45, Plate IV, Fig. 30): [Examined material: ten eggs (three clutches and one odd egg). Clutch size: 3–4 eggs. Measurements: av. 73.39 × 54.22, length variation 69.80–79.10, breadth variation 52.60–56.40, longest egg 79.10 × 53.30, broadest egg 71.80 × 56.40 mm. Breeding months: W. Java Aug. (x), Sept. (1), Oct. (x); Central Java Oct. (1); E. Java Sept. (1)].

(*b*) Hellebrekers (1967: 26): 'Bartels: 1/2, October. Gundih, Djuworo, Central Java. Measurements (2): av. 68.5 × 50.0. Weight: 11.04 and 12.77.

(*c*) Hoogerwerf (1967). '2/2; September; East and West Java. Measurements (4) av. 76.13 (74.5–79) × 53.53 (52.5–54.8. largest egg: 79 × 53; maximal variation in length in the same clutch: 2.5 (76.5–79). Weight (2/2, 1/4: av. 14.655 (13.162–15.870); maximal variation in the same clutch: 1.980 (13.508–15.488). For 18 previously recorded breeding data and 10 earlier measured eggs from Ujung Kulon nature reserve, West Java, see Hoogerwerf (1949: 45, Plate IV, Fig. 30)'.

(*d*) Hoogerwerf's private collection contains three eggshells (1/2) of this species labelled 'W. Java, without date' (RMNH 75515); (1/4) 'Udjung Kulon, W. Java, 30.09.1942' (RMNH 75516) and (1/2) 'Merak, W. Java, 28.09.1943' (RMNH 75517).

The clutch (1/2) in Hoogerwerf's collection 'W. Java, without date' (RMNH 75515) is from the Becking collection. These eggs were collected in the teak *Tectona grandis* forests of Central Java and were a gift from a friend (ms. H; *cf.* Fig. 5, no. 25). I originally wrote on them in red ink '23 Sept. 1944, Randublatung, Central Java'. The ink has been largely removed, leaving an artificial pink wash to the shells, although on close inspection some lettering and figures are still faintly visible. Apart from this, one of the eggs has a natural scar by which I could recognise it immediately (*cf.* Fig. 10).

Other clutches from the Becking collection appropriated by Hoogerwerf

The following clutches, mentioned in my previous attempt to bring Hoogerwerf's actions to light, disappeared from the Becking collection whilst in storage at Bogor. They were presented as part of his own collection by Hoogerwerf (1949a) but were no longer present when it came to RMNH after his death. In response to my 1969 draft he probably destroyed these clutches.

26. **REEF EGRET** *Egretta sacra*

Clutch: 26 July 1941, 1/4, Palabuanratu (Wijnkoopsbaai), Cikepuh, Batu Beula. Measurements: 41.0 × 32.7; 42.0 × 33.9; 44.2 × 33.8; 41.5 × 33.3 mm. (ms. H; *cf.* Fig. 6, no. 26)

Of the three clutches I collected on the same day and at the same locality (*cf.* Fig. 6, no. 26), this 1/4 and the 1/2 clutch disappeared from our collection while it was in storage at Bogor. The 1/1 clutch, also of the same date and locality, was left untouched.

27. **CRESTED GOSHAWK** *Accipiter trivirgatus*

Clutch: 3 March 1944, 1/2, Kp. Cibogo, Bogor. Measurements: 44.8 × 37.2, 45.0 × 35.3 mm. Shell weight 1.20 and 1.27 g; fresh weight 33.25 and 30.00 g. (ms. H; *cf.* Fig. 6, no. 27)

28. **BESRA** *Accipiter virgatus*

Clutch: 10 April 1941, 1/2, Arcamanik, Mt. Geggerbintang, Bandung. Measurements: 36.1 × 29.7 and 35.7 × 29.3 mm. Shell weights 1.22 and 1.22 g. (ms. H; *cf.* Fig. 7, no. 28)

Of this clutch, and the preceding one, I also have watercolours.

29. **CHANGEABLE HAWK-EAGLE** *Spizaetus cirrhatus*

Two clutches: 6 June 1941, 1/1 Cibadak, Mt. Walat, dessa Ciantajan, Sukabumi, leg. M. Bartels Jr. Measurements: 67.5 × 54.3 mm, shell weight 6.427 g, and 16 August 1941, 1/1 Cikawung, Cireundeun, Sukabumi, leg. M. Bartels Jr. Measurements: 61.4 × 50.7 mm, shell weight 7.975 g. (ms. H; *cf.* Fig. 7, no. 29)

These two clutches were gifts of Max Bartels Jr. to our collection. Both disappeared during the war whilst in the Bogor museum. The clutch of 16 August 1941 is mentioned in Bartels' handwriting (*cf.* Fig. 4, no. 12, ninth entry) with the notation (Be). The pullus (white phase) of Changeable Hawk-Eagle, collected on 18 August 1944 at Cidjulang, Pasir Maung (Fig. 7, no. 29, first entry), remained in our collection and is now in Leiden (RMNH 24192).

30. **MANGROVE WHISTLER** *Pachycephala grisola*

Clutch: 18 February 1945, 1/2, Botanical Gardens, Bogor. Measurements: 21.3 × 15.9 and 21.4 × 15.9 mm, shell weight 0.165 and 0.159 g, fresh weight 2.91 and 2.91 g. (ms. H; *cf.* Fig. 7, no. 30)

Of the two clutches indicated in our typescript, made immediately after the discovery, that dated 18 February 1945 (fresh eggs) disappeared, while the 9 February 1945 (hard-set) clutch remained.

31. **CRIMSON SUNBIRD** *Aethopyga siparaja*
Four clutches, all from Depok (07°25'S, 109°37'E), on the main road between Bogor and Jakarta, had the following data: (a) 25 June 1944, 1/2, 14.2 × 10.7 and 14.6 × 10.3 mm, hard-set, shell weight 0.032 g; (b) 25 June 1944, 1/2, 15.6 × 11.0 and 15.4 × 10.7 mm, hard-set, fresh egg weights 0.83 and 0.87 g, shell weights 0.039 and 0.038 g; (c) 17 December 1944, 1/2, 15.7 × 10.8 and 14.1 × 10.2 mm, fresh, fresh egg weights 0.81 and 0.85 g, shell weights 0.042 and 0.037 g; (d) 26 December 1944, 1/2, 13.8 × 10.9 and 14.0 × 10.8 mm, shell weights 0.042 and 0.042 g (ms. H; *cf.* Fig. 8, no. 31). All these eggs disappeared from their boxes, except one egg from the hard-set 1/2 clutch (b).

Furthermore, a conceptual paper of mine in manuscript advocating a classification system for egg shapes into five main classes, according to a mathematical formula containing the ratio length and width of the egg, and the position of its greatest width along the long axis (*cf.* Fig. 9), was held for a time at the Bogor museum. The manuscript was apparently read by Hoogerwerf at Bogor and its ideas used by him without my authorisation (Hoogerwerf 1949a: 3). The manuscript was among the papers recovered from the museum by my brother in April 1947.

Moreover, in Hoogerwerf's archives donated to the Zoological Museum Amsterdam by his widow, a manuscript by the German ornithologist August Spennemann was found, along with a 64-page typescript signed by my brother Rudolf and myself concerning breeding months, egg acquisitions, nest descriptions, etc., of Javan birds. Both documents had gone missing from the Bogor museum during the war. The Amsterdam museum returned a copy of this manuscript to me and, some years later, also the original.

Incorrect information in other publications

In 1950 two papers in Dutch by Hoogerwerf (1950a,b) described the biology and nesting of birds in the Botanical Gardens of Cibodas on Mt. Gede and in the Botanical Gardens at Bogor. Because many eggs in Hoogerwerf's collection were not his own, he often possessed few data on nesting habits and nest descriptions. The accounts in his publications are therefore often rather general, very unspecific, and sometimes plain wrong, as when he described the nest of Mountain Tailorbird *Orthotomus cuculatus* as like that of other tailorbirds: ['the nest is like that of a tailorbird (*Orthotomus*), but mainly composed of green moss, mixed with much seed down'] (Hoogerwerf 1950a: 111). In fact the nest of Mountain Tailorbird differs markedly from other tailorbirds, it being a dome-shaped structure with a side entrance exclusively composed of dry rattan or bamboo leaves, and usually placed in the fork of a small subcanopy sapling in primary forest (*cf.* Fig. 11). Although Hoogerwerf described and depicted the eggs of this tailorbird (1949a, Plate XVII.17, Fig. 239), there are no eggs of this species in his collection.

Moreover, Hoogerwerf ignored earlier publications by other authors when he claimed to have discovered species such as Rufous Night Heron *Nycticorax caledonicus*, Glossy Ibis *Plegadis falcinellus* and Beach Stone Curlew *Esacus magnirostris* breeding on Java for the first time: 'all these species were not known as breeding birds of Java at the time that the Bartels collection was obtained' (Hoogerwerf *in* Hellebrekers & Hoogerwerf, 1967: 6). However, they had already been recorded as breeding on Java by Bartels & Stresemann (1929).

Similarly, the occurrence of *Nycticorax caledonicus* on Java had already been reported by Schoenmakers (1933), the then director of the Zoological Gardens at Surabaya (East Java). The 'rediscovery' by Hoogerwerf (1949b) of the eggs of the Javanese race of Common Coot *Fulica atra lugubris* at the Bogor museum is also an overstatement, as these two eggs, when I saw them in 1941–42, had been very neatly labelled by P. F. Franck, former taxidermist at the museum with: '[May 1937, Lake Taman Hidup (1968 m), Yang Highlands (Plateau), E. Java, leg. Mr. J. H. ten Cate, donation Mr. A. J. M. Ledeboer]' (Ledeboer being at that time owner of the Yang Highlands area). Moreover Hoogerwerf (1949b: 55–56) stated that he had examined only two eggs of the Javanese race of the Common Coot, but illustrated six (Hoogerwerf 1949b, Plate V, Fig. 42).

Discussion and conclusions

The information presented above clearly demonstrates that Hoogerwerf impoverished other oological collections from Java to enrich his own, especially the Bartels collection but also the Bouma and Becking collections. The examples given are far from exhaustive. The missing clutches are almost all of the rarer or more difficult-to-obtain species. Thirteen species originally represented in the Bartels egg collection were no longer in that collection at the time of its acquisition by RMNH. These are: Bronze-winged Jacana *Metopidius indicus*, White-headed Stilt *Himantopus leucocephalus*, Wreathed Hornbill *Rhyticeros undulatus*, Asian Pied Hornbill *Anthracoceros albirostris*, Rufous Woodpecker *Celeus brachyurus*, White-bellied Woodpecker *Dryocopus javensis*, Straw-headed Bulbul *Pycnonotus zeylanicus*, Black-headed Bulbul *P. melanicterus*, Cream-vented Bulbul *P. simplex*, Olive-winged Bulbul *P. plumosus*, Yellow-bellied Warbler *Abroscopus superciliaris*, Plain Flowerpecker *Dicaeum concolor* and Crimson Sunbird *Aethopyga siparaja*. At the request of L. D. Brongersma, in 1970 I prepared a near-complete list of all clutches that had disappeared from the original Bartels collection near the end of the Pacific war (March 1944), after it was evacuated to the Bogor museum. This document should still be available in RMNH.

For the P. J. Bouma collection a similar list could be made. From the taxonomically arranged Becking collection all the Accipitridae and Falconidae eggs disappeared while the collection was in Bogor, when Hoogerwerf was present in the Bird Division. A number of these raptor eggs were included and figured in Hoogerwerf (1949a). Hoogerwerf must have taken at least some of these eggs with him to the Netherlands, because his 1967 publication mentioned their weights, and implied that they belonged to his own collection. His 1949a publication did not mention any such egg weights. These eggs were, however, missing from his collection after his death. He probably destroyed them to eliminate incriminating evidence.

As already briefly mentioned, I also lost a great number of my notebooks and manuscripts at the Bogor museum during the Japanese occupation. I was fortunate that a number were kept at another location and thus survived the war. To my great surprise, in May 2005, I was informed by Dr S. (Bas) van Balen that a 64-page manuscript, clearly signed by my brother and myself, had been discovered among Hoogerwerf's papers, as given to Dr P. J. H. van Bree of the Zoological Museum Amsterdam by Hoogerwerf's widow, shortly after Hoogerwerf's death in 1977. It was wrapped within a manuscript of the German field ornithologist August W. Spennemann containing field observations of a number of Javanese birds, including Javan Lapwing *Vanellus macropterus*. This manuscript had been part of my papers stored at the Bogor museum during the war, from where it had gone missing. This discovery was all the more surprising as M. J. van Steenis-Krusemann, widow of Prof. C. G. G. J. van Steenis, botanist and founder of the Flora Malesiana, who also lived

in Bogor during the war, wrote that all Hoogerwerf's papers had been burnt posthumously by his widow (van Steenis-Krusemann 1988: 36).

Finally, Hoogerwerf's private egg collection has an unnatural, unbalanced species composition. Common species are poorly represented or even absent, whereas rare species are over-represented. Eggs of such (at the time) common species as Linchi Swiftlet *Collocalia linchi*, Blue-eared Kingfisher *Alcedo meninting*, Coppersmith Barbet *Megalaima haemacephala*, Brown-capped Woodpecker *Dendrocopos moluccensis*, White-headed Munia *Lonchura maja*, Java Sparrow *Pada oryzivora* and Asian Glossy Starling *Aplonis panayensis* are completely lacking. The very common sunbird Brown-throated Sunbird *Anthreptes malacensis* is represented by only one clutch, whereas a number of clutches of the rare species (e.g. Ruby-cheeked Sunbird *Anthreptes singalensis*) are present. There is no clutch of the very common Brown-capped Woodpecker *Dendrocopos moluccensis*, but the collection does contain eggs of extremely rare woodpeckers such as Rufous Woodpecker *Celeus brachyurus* and White-bellied Woodpecker *Dryocopus javensis*. I can only conclude that, at the time of his main oological article (Hoogerwerf 1949a), Hoogerwerf had no private egg collection worth speaking of, and he primarily assembled eggs from the three collections present in the Bogor museum while he was there: the Bartels, Bouma and Becking collections.

Although Hellebrekers & Hoogerwerf (1967) purported to describe the eggs from two different collections, i.e. the Bartels collection and Hoogerwerf 's private collection, their concern for the main part is the same collection, i.e. the Bartels collection. To make this plausible, a large amount of information on dates and localities was falsified by Hoogerwerf. I have found no evidence that Hellebrekers knew of this, and do not believe that he did. However, it is my considered opinion that all oological and nesting information published by, or together with, or based on, Hoogerwerf, needs checking. Moreover, this means that information derived from his publications and used to indicate the ranges and breeding seasons of Javanese birds is unreliable. Thus, for example, certain species accounts in Collar *et al.* (2001), notably that on Javan Lapwing *Vanellus macropterus*, require reworking.

In this connection it is worth referring to Mees (1986) for exposure of an early example of 'photo-shopping' (i.e. photographic manipulation) by Hoogerwerf (1965) in his attempt to find acceptance for a new subspecies of *Pycnonotus plumosus*, i.e. *P. p. sibergi*. Mees (1996), discussing the geographic variation of some birds of Java, also demonstrated that the subspecies *Aegithina tiphia djungkulanensis* described by Hoogerwerf (1962) is in fact identical to the Sumatran subspecies *horizoptera*. Many other subspecies described by Hoogerwerf should probably also be reassessed.

Mees (2006: 6–7) listed eight bird species reported by Hoogerwerf (1954, 1956) from the western islands of Flores (Komodo, Padar and Rinca), which are, according to him, unknown from this region and whose records are very questionable. Finally, Hoogerwerf (1939, 1970) published photographs of a living Javan Tiger *Panthera tigris* taken in the Ujung Kulon nature reserve, West Java. Both Dr Max Bartels and I were intrigued by these pictures, as they look somewhat abnormal for a Javan Tiger, and independently came to the conclusion that the stripes on the tiger's coat in these pictures had been added using pen and ink.

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References:

Ali, S. & Ripley, S.D. 1971. *Handbook of the birds of India and Pakistan*, vol. 6. Oxford Univ. Press.

Bartels, E. 1931. Vogels van Kole Beres. [Birds of Kole Beres.] *Nat. Tijdschr. Ned. Indië* 91: 308–348.

Bartels, M. 1937. Zwei für Java neue Brutvögel. *Orn. Monatsber.* 45: 16–19.

Bartels, M. & Bouma, P. J. 1937. Keerkringvogels en slechtvalken aan Java's Zuidkust. [Tropicbirds and Peregrine Falcons on the south coast of Java.] *Tropische Natuur* 26: 108–111.

Bartels, M. Jr. & Stresemann, A. W. 1929. Systematische Übersicht der bisher von Java nachgewiesenen Vögel. *Treubia* 11: 89–146.

Becking, J.-H. 1989. *Henry Jacob Victor Sody (1892–1959), his life and work, a biographical and bibliographical study.* E. J. Brill, Leiden.

Becking, J.-H. 2001. In Memoriam. In Memory of Hans Bartels. *Ardea* 89: 420–425.

Bouma, P. J. 1932. Broedbiologische waarnemingen bij Soemoerkondang, Cheribon, Java. [Observations on breeding biology at Soemoerkondang, Cheribon, Java.] *Org. Cl. Ned. Vogelk.* 4: 154–157.

Bouma, P. J. 1934. Broedtijden in de houtvesterij Tjiledoek, Java. [Breeding periods in the forestry district of Tjiledoek, Java.] *Ardea* 25: 100–107.

Collar, N. J., Scharlemann, J. P. W. & Fisher, C. T. 2000. Max E. G. Bartels and the Javan Lapwing *Vanellus macropterus*. *Kukila* 11: 122–124.

Collar, N. J., Andreev, A. V., Chan, S., Crosby, M. J., Subramanya, S. & Tobias J. A. (eds.) 2001. *Threatened birds of Asia: the BirdLife International Red Data book.* BirdLife International, Cambridge, UK.

Hellebrekers, M. P. J. & Hoogerwerf, A. 1967. A further contribution to our oological knowledge of the island of Java (Indonesia). *Zool. Verhand. Leiden* 88: 1–164.

Hoogerwerf, A. 1939. Uit het leven van de gevreesden "gestreepte". [From the life of the feared "striped".] *Tropische Natuur* 28: 4–13.

Hoogerwerf, A. 1949a. Een bijdrage tot de oölogie van het eiland Java. [A contribution to the oölogy of the island of Java.] *Limosa* 22: 1–277.

Hoogerwerf, A. 1949b. Over van Java afkomstige eieren en balgen van de Meerkoet (*Fulica atra* L). [On eggs and skins of the Common Coot (*Fulica atra* L.) from Java.] *Limosa* 22: 372–375.

Hoogerwerf, A. 1950a. De avifauna van Tjibodas en omgeving, inclusief het natuurmonument Tjibodas-Gn. Gede (West-Java). [The avifauna of Tjibodas and surroundings including the nature reserve Tjibodas-Gn. Gede (West Java).] *Limosa* 23: 1–158.

Hoogerwerf, A. 1950b. De avifauna van de Plantentuin te Buitenzorg (Java) [The avifauna of the Botanical Gardens at Buitenzorg (=Bogor) (Java).] *Limosa* 23: 159–280.

Hoogerwerf, A. 1954. Rapport over een naar Komodo, Padar en Rintja (Kleine Sunda Eilanden) gemaakte dienstreis van 21 Mei–6 Juli 1953. [Report on a tour of duty to Komodo, Padar and Rintja (Lesser Sunda Islands) from 21 May–6 July 1953.] Unpubl.

Hoogerwerf, A. 1955. Iets over de vogels van de eilanden Komodo, Padar en Rintja, het land van *Varanus komodensis*. [A bit about the birds of the islands of Komodo, Padar and Rintja, the land of *Varanus komodensis*.] *Limosa* 28: 96–112.

Hoogerwerf, A. 1962. On *Aegithina tiphia* (Linn.), the Common Iora, from Udjung Kulon, western Java. *Bull. Brit. Orn. Cl.* 82: 160–165.

Hoogerwerf, A. 1965. *Pycnonotus plumosus* subspp. with the description of a new subspecies from Bawean Island. *Bull. Brit. Orn. Cl.* 85: 47–53.

Hoogerwerf, A. 1970. *Ujung Kulon. The land of the last Javan Rhinoceros*. E. J. Brill, Leiden.

de Jong, L. 1985. *Het Koninkrijk der Nederlanden in de Tweede Wereldoorlog*, vol. 11b, pt. II. [*The Netherlands empire in the Second World War.*] Rijksinstituut voor Oorlogsdocumentratie, Staatsuitgeverij, 's-Gravenhage.

Mees, G. F. 1986. A list of the birds recorded from Bangka Island, Indonesia. *Zool. Verh. Leiden* 232: 1–176.

Mees, G. F. 1996. *Geographic variation in birds of Java*. Publ. Nuttall Orn. Cl. 26. Nuttall Orn. Cl., Cambridge, MA.

Mees, G. F. 2006. The avifauna of Flores (Lesser Sunda Islands). *Zool. Mededelingen Leiden* 80(3): 1–261.

Schoenmakers, F. F. 1933. *Nycticorax caledonicus*? *Tropische Natuur* 22: 200.

van Steenis-Kruseman, M. J. 1988. *Verwerkt Indisch Verleden*. [*My Dutch East Indian past dealt with.*] Privately published, Oestgeest.

Voous, K. H. 1995. *In de Ban van Vogels. Ornithologisch Biografisch Woordenboek van Nederland*. [*Under the spell of birds. Ornithological biographical dictionary of the Netherlands.*] Uitgev. Scheffers, Utrecht.

Address: Jan-Hendrik Becking (*d.* 16 January 2009). Please address correspondence to Joost Brouwer, Brouwer Envir. & Agric. Consultancy, Wildekamp 32, 6721 JD Bennekom, The Netherlands, e-mail BrouwereEAC@orange.nl