

Butterflies of the Holy Land collected and observed between 1863 and 1865 by H. B. TRISTRAM and O. PICKARD-CAMBRIDGE

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Abstract: This paper details an important historical collection of butterflies in the Oxford University Museum of Natural History, the result of two British clerical expeditions to the Ottoman Levant of the mid-19th century, visiting Syria (Lebanon), Palestine (Israel) and East Jordan between 1863 and 1865. The expeditions are those of Henry Baker TRISTRAM (September 1863 to July 1864) and Octavius PICKARD-CAMBRIDGE (March to May 1865). The 51 species of butterfly collected during these expeditions are highly significant, being among the oldest-known specimens from the region. Details of the routes and observations made during the two journeys are reconstructed from published accounts, and this data is used to infer collecting localities and dates for most of the species. The convoluted history of the TRISTRAM/PICKARD-CAMBRIDGE butterfly specimens at the OUMNH is discussed and an inventory of the collection is given.

Tagfalter aus dem Heiligen Land, gesammelt und beobachtet zwischen 1863 und 1865 von H. B. TRISTRAM und O. PICKARD-CAMBRIDGE

Zusammenfassung: Eine kürzlich im Oxford University Museum of Natural History (OUMNH), Oxford, U.K., gefundene historische Sammlung von Tagfaltern aus dem Heiligen Land aus der Mitte des 19. Jahrhunderts wird in detail beschrieben. Sie basiert auf den Reisen zweier Kleriker ins südliche Türkische Reich zwischen 1863 und 1865 mit Besuchen in Syrien (Libanon), Palästina (Israel) und dem Ostjordanland. Es handelt sich einmal um die Expedition von Henry Baker TRISTRAM (September 1863 bis Juli 1864), zum anderen die von Octavius PICKARD-CAMBRIDGE (März bis Mai 1865). Die nachgewiesenen 51 Tagfalterarten sind historisch bedeutsam, handelt es sich doch mit um die ältesten aus dieser Region. Details zu den Reiserouten und Beobachtungen der beiden Reisen werden rekonstruiert aus publizierten und erhaltenen Aufzeichnungen, und auf dieser Basis werden die Fundorte und daten der meisten Arten rekonstruiert; einige Exemplare werden farbig abgebildet. Die Geschichte der TRISTRAM/PICKARD-CAMBRIDGE-Tagfalteraufsammlung im OUMNH wird kurz diskutiert und eine Liste der Sammlung gegeben.

Introduction

In every way we were repaid for our excursion. Scenery, fish, birds, butterflies, flowers, shells – in all we gathered a harvest.

Henry Baker TRISTRAM, Theologian, traveller and naturalist, on collecting on the shores of Lake Galilee, 27th February 1864, in: TRISTRAM (1865: 426).

During visits to the Oxford University Museum of Natural History (OUMNH) by the first author (DB) to study butterflies from Palestine and surrounding areas, a small collection of historical specimens was discovered. The collection was immediately recognized as significant, representing some of the oldest known

butterfly specimens from the region. This prompted further research into the collection, the personalities involved and their travels in the context of butterfly collecting.

The collection is the result of two separate expeditions undertaken by the English clergymen Canon Henry Baker TRISTRAM (HBT) and the Reverend Octavius PICKARD-CAMBRIDGE (OPC). Their motivation to travel to the Holy Land was no doubt partly religious, and they both visited places of significance to the Christian faith (A. W. PICKARD-CAMBRIDGE 1918, TRISTRAM 1865). They were also keen naturalists and collectors, but because the study of Lepidoptera was not their primary focus, their collecting efforts will have been somewhat opportunistic.

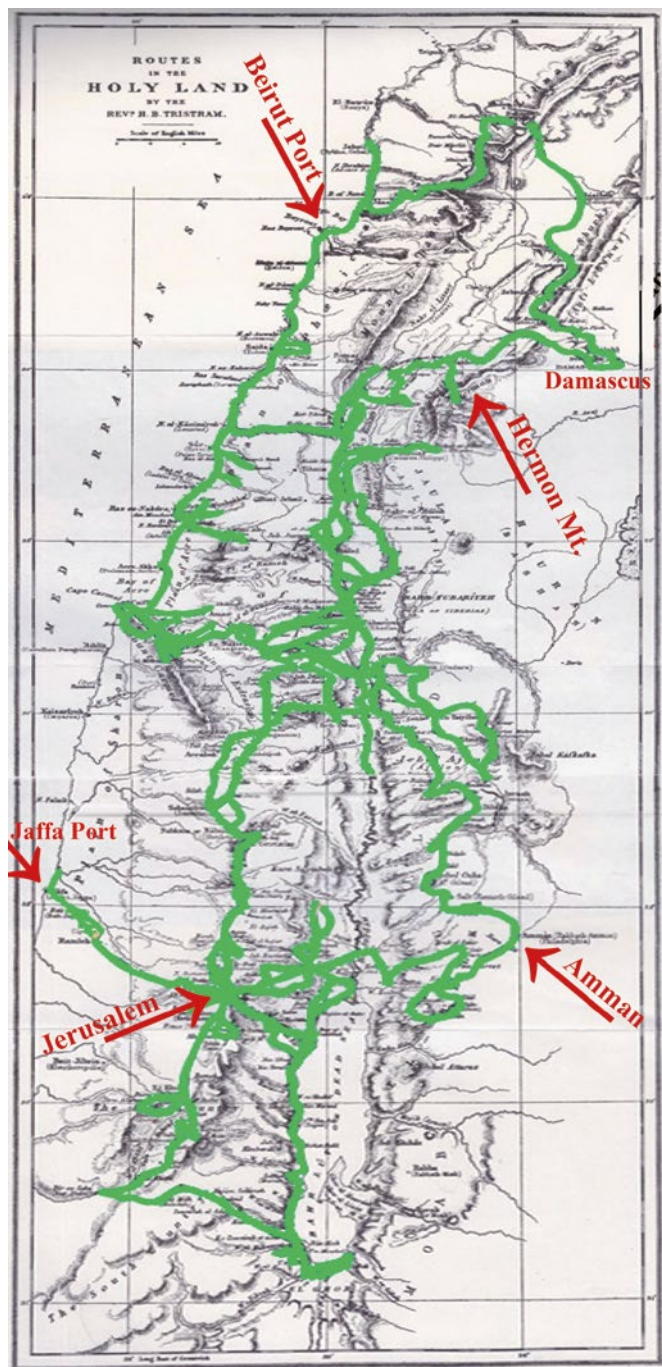
HBT is perhaps best remembered as an ornithologist, although it is clear he had a life-long interest in butterflies (BODENHEIMER 1956). OPC was one of the most accomplished and prolific spider taxonomists of his time and studied in great detail the spider fauna of North Africa and the Levant. Despite this, over 100 butterflies collected by both men survive to the present and provide a unique historical record for the region.

The expedition of Henry Baker TRISTRAM (September 1863 to July 1864)

HBT and the other members of his expedition anchored in Beirut Harbour in September 1863. His entourage comprised: W. P. C. MEDLYCOTT and P. EGERTON-WARBURTON (artists), H. T. BOWMAN (photographer), B. T. LOWNE (botanist), Edward BARTLETT (zoological assistant to HBT) in addition to communication, logistics and security: H. M. UPCHER, C. W. SHEPHERD, J. H. COCHRANE, BARNEBY-LUTLEY and Mr. GARNIER (TRISTRAM 1865).

In the following ten months they completed a round trip across the Southern Ottoman Empire (see map, Col.-Pl. 1): Heading south from Syrian Beirut they traveled widely in Palestine; from the coastal Mediterranean swamps and rivers they ascended the plateau to the Jerusalem, Samarian and Judean hills. They explored the Dead Sea oases and crossed the Jordan River, becoming the first scientists to visit Eastern Jordan. They returned to Palestine to explore several previously unvisited biotopes before heading north to the Anti-Lebanon Mountains and Mount Hermon, crossing the Cedar Mountains of the Lebanese range before descending to the Mediterranean coast and finally sailing back home to England.

The following year HBT published an account of his travels (TRISTRAM 1865) in which he wrote about observing and



Colour Plate 1: Map of the route taken by the expedition of H. B. TRISTRAM 1863–1864. Modified from the original publication 1865/1882.

collecting butterflies at several localities. On one such occasion, after leaving Nazareth on February 26th 1864, HBT writes: “We entered the glades of an open oak forest, the first we had seen in Palestine ... We pleasantly wandered for an hour or two through the forest, descending always towards the east, having many a snap shot at partridge or woodpecker, and catching butterflies which now began to people the glades (*Parnassius apollinus*, *Gonaepertyx* [sic] *cleopatra*, orange tips, and many south European species) ...” (TRISTRAM 1865: 418). Within this publication (and a 2nd edition of 1866), there are also many drawings (partially coloured), some of which are reprinted here in black and white (see B&W-Plates 1–3).

HBT and his party stopped at the plain of Gennesaret between March 1st and 8th, 1864 to devote to “fishing, nest-

OPZ: Palestine insects in Oxford Univ. Museum

<i>Papilio machaon</i>	1	<i>Chrysophanus thea</i>	2
<i>Thais canis</i>	4	" <i>phloea</i>	2
<i>Gonepteryx cleopatra</i>	1	<i>Gyanura jordanus</i>	1
<i>Colias edusa</i>	5	<i>Coturnipha pauphichus</i>	2
<i>Euclyptus aeneus</i>	3	<i>Eumenes theophrastus</i>	1
" <i>calceus</i>	3	" <i>antileas</i>	2
<i>Synchlora daphne</i>	3	<i>Epuriphora palmeria</i>	2
<i>Aporia crataegus</i>	2	<i>Melanargus tithonus</i>	8
" <i>pupa</i>		" <i>palmeria</i>	1
<i>Danaus chrysippus</i>	1	<i>Asperia alba</i>	6
<i>Limenitis camilla</i>	2	" <i>rossellus</i>	2
<i>Pyrausta cardui</i>	1	" <i>albus</i>	3
<i>Glyptotendipes</i>	4	<i>Deilephila pulchella</i>	1
<i>Melitaea phala</i>	7	<i>Urtica syriaca</i>	1
" <i>didyma</i>	9	<i>Gnophos carolina</i>	1
" <i>luna</i>	7		
<i>Argynnis latonia</i>	4		
<i>Cupido arctus</i>	2		
<i>Cyrena locust</i>	8		
" " <i>var. sepi</i>	2		
" " <i>amanda</i>	1		
" " <i>antares</i>	2		
" " <i>theophrastus</i>	3		
" " <i>semitarsus</i>	3		
" " <i>antileas</i>			
<i>Sedania galba</i>	1		
<i>Sclerophyes hylas</i>	3		
<i>Chilodactylus</i>	6		
<i>Cyanitis agestis</i>	2		
<i>Polyommatus bethus</i>	2		

B&W-Fig. 1: List of butterfly specimens in the TRISTRAM-CAMBRIDGE collection compiled by A. W. PICKARD-CAMBRIDGE (A. W. PICKARD-CAMBRIDGE [undated]).

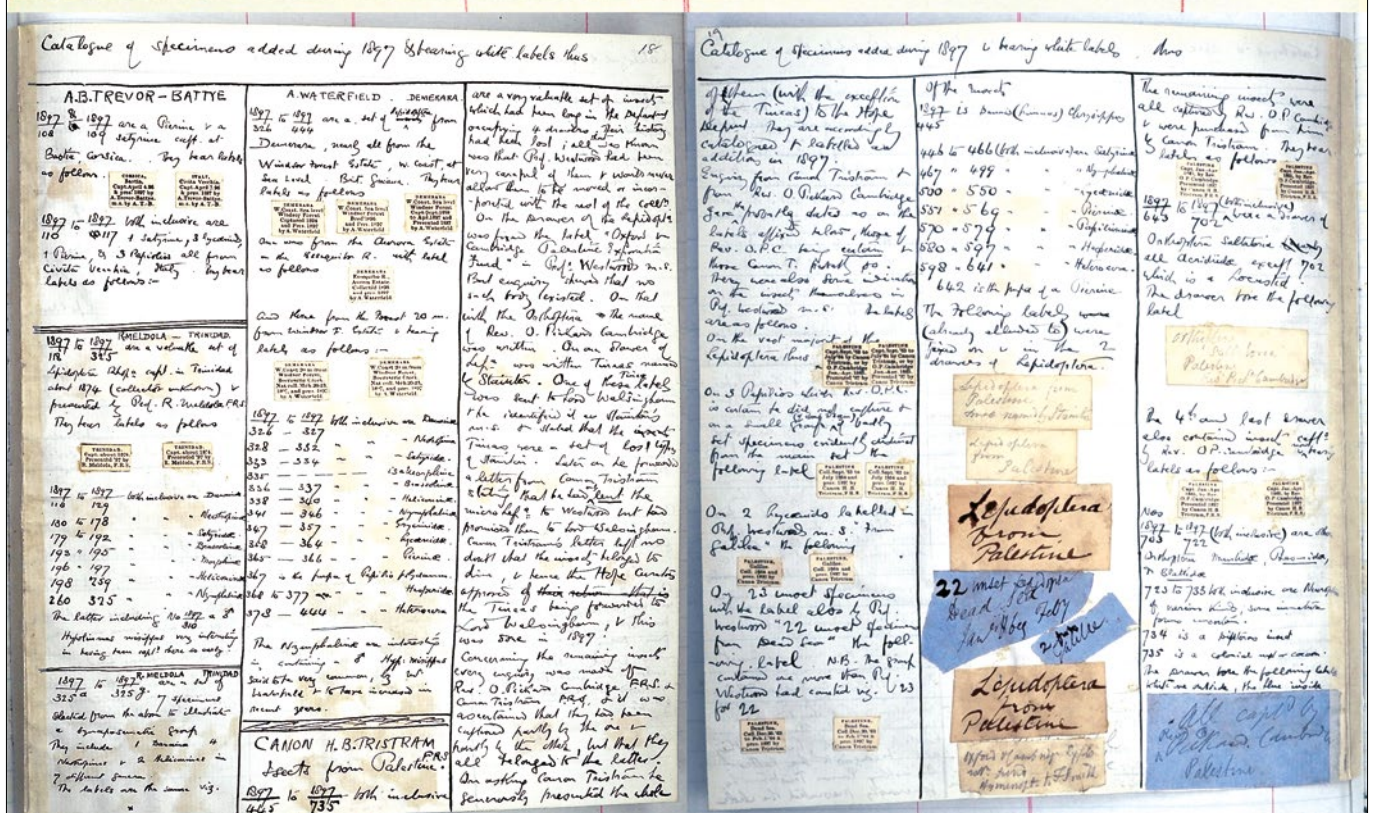
ing, and collecting” (TRISTRAM 1865: 431). Some of the specimens collected here almost certainly included butterflies as TRISTRAM (1865: 434) observes “the butterflies, which now for the first time in our travels were abundant, curiously enough were for the most part identical with those of England, many of which re-appear here after being supplanted by cognate species in Eastern and Southern Europe. Thus the Painted Lady (*Cynthia cardui*), the large and small cabbage whites (*Pontia brassicae* and *P. rapae*), swallow-tail (*Papilio machaon*), clouded orange (*Colias edusa*), were mingled with several Nubian and Egyptian species, and our own orange tip (*Anthocharis cardaminis*), take the place of the South European *A. eupheno*.”

The expedition of Octavius PICKARD-CAMBRIDGE (March to May 1865)

Eight months later, on the 16th March 1865, Octavius PICKARD-CAMBRIDGE, along with two companions (his brother-in-law T. E. B. TENNANT and a Mr. O. BRADSHAW), arrived in Jaffa from Egypt and started a two-month horseback expedition in Palestine (Israel) to Syria

SPECIMENS ADDED during 1897 and bearing labels thus :

Col.-Pl. 2



Colour Plate 2: Photographs of relevant two pages of the accessions register of the OUMNH. Shown is the entry made by E. B. POULTON, dated 1897, in which he discusses the contents and history of the TRISTRAM-CAMBRIDGE insect collection (POULTON 1904). Left side 1st page, right side 2nd page; head line separate facsimile in larger size.

(Damascus and Lebanon), proceeding to Baalbek en-route to Beirut and sailing back home on 18th May 1865. During this period they collected "700 species of all orders, and of Spiders (Araneidea) to about 300 species" (O. PICKARD-CAMBRIDGE 1872). A synopsis of the trip based on OPC's diaries is given in the memoir written by his son, Sir Arthur Wallace PICKARD-CAMBRIDGE (AWPC) (A. W. PICKARD-CAMBRIDGE 1918) and further details of his route can be gleaned from PICKARD-CAMBRIDGE (1872). To reconstruct a detailed itinerary it will be necessary to consult OPC's original diary. The whereabouts of this is currently unknown, though if it still exists is probably held by the PICKARD-CAMBRIDGE family (Z. SIMMONS, pers. comm.).

The TRISTRAM and PICKARD-CAMBRIDGE collection at the Oxford University Museum of Natural History

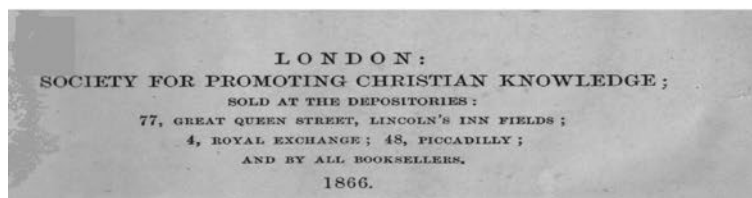
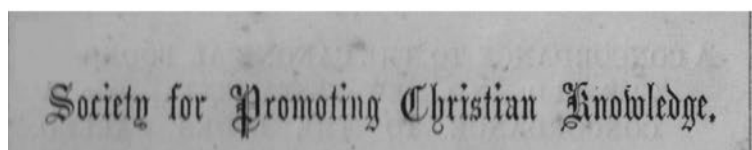
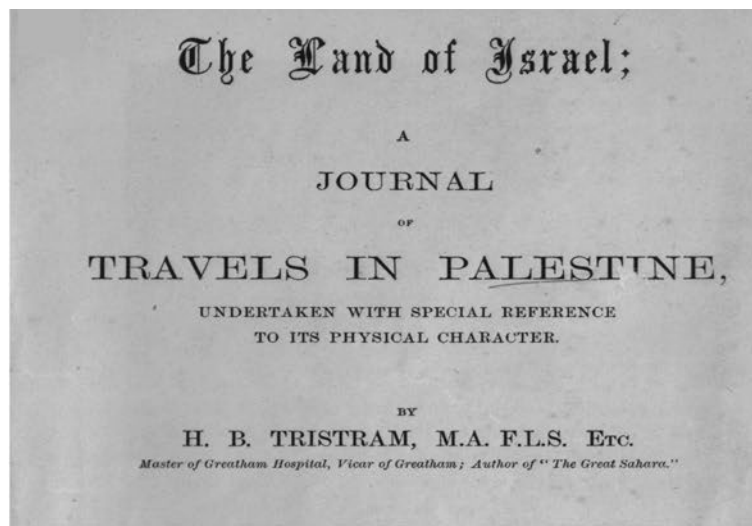
Details of the history of the specimens collected by OPC and HBT were reconstructed from various unpublished manuscripts and letters in the archives of the OUMNH.

OPC sold a 'first set' of his insects to HBT in 1866 for 65 pounds and 10 shillings (A. W. PICKARD-CAMBRIDGE [undated], see B&W-Fig. 1). A. W. PICKARD-CAMBRIDGE also notes that a set of duplicates was retained by OPC, although the whereabouts of these is now unknown.

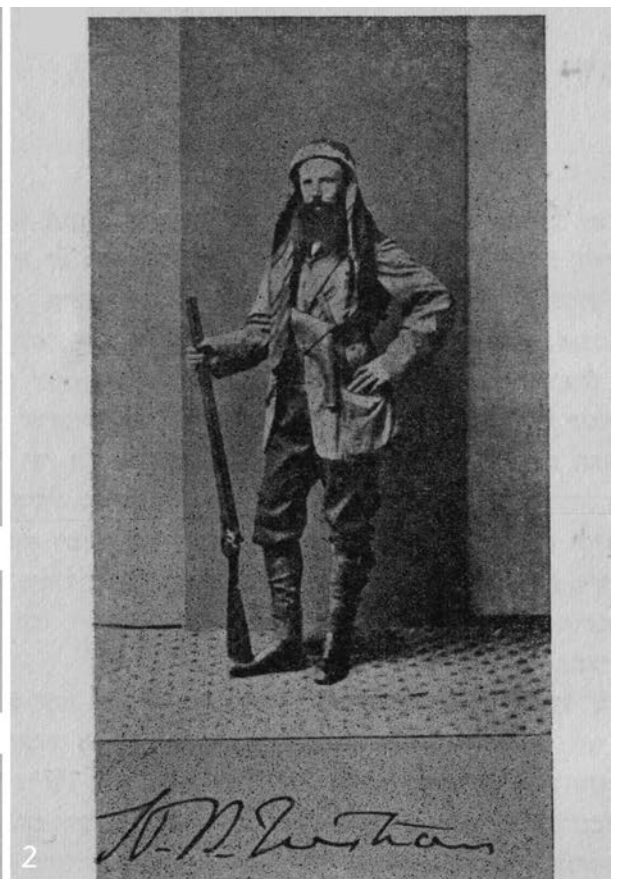
Soon after, HBT sent both the specimens collected by himself and those of OPC as a loan to John WESTWOOD,

the first curator (Hope Professor of Zoology) of the entomology collections at Oxford (TRISTRAM 1897a). The entire insect collection consisted of approximately 300 specimens contained in four cabinet drawers (POULTON 1904). WESTWOOD kept the specimens for many years, apparently without studying them further, although he evidently recognized the value of the collection as "Prof. WESTWOOD had been very careful of them and would never allow them to be moved or incorporated with the rest of the Collⁿ" (POULTON 1904).

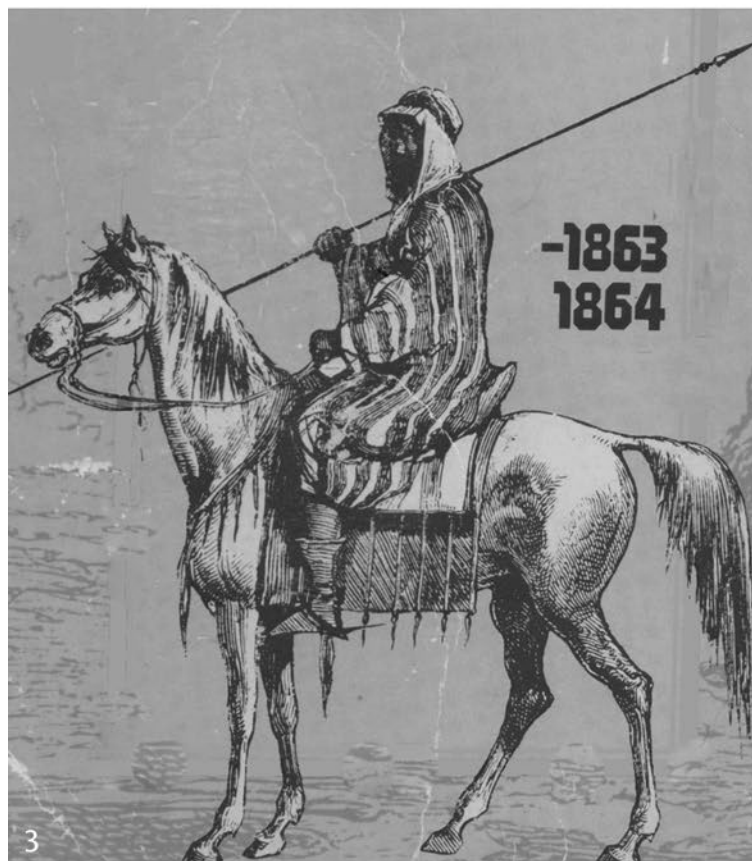
The second Hope Professor, Edward B. POULTON, took over the running of the collection at Oxford in 1893. In an effort to catalogue the collection he made enquiries to HBT, writing to him a number of times in the following years (replies given by TRISTRAM 1896a, 1896b, 1897a, 1897b) to discuss the specimens and to request more information, particularly details of where and when they were captured. As a result it became evident that almost all the Lepidoptera (but not the other orders) had become mixed, or that some other information known only to WESTWOOD had been lost, and unfortunately it was no longer possible to ascertain which specimens had been collected by HBT and which by OPC. The only exceptions to this were a small number of specimens originating from HBT; "3 Papilios which Rev. O.P.C. is certain he did not capture" and 2 lyceanids labelled in WESTWOOD's handwriting "from Galilee" (POULTON 1904).



1



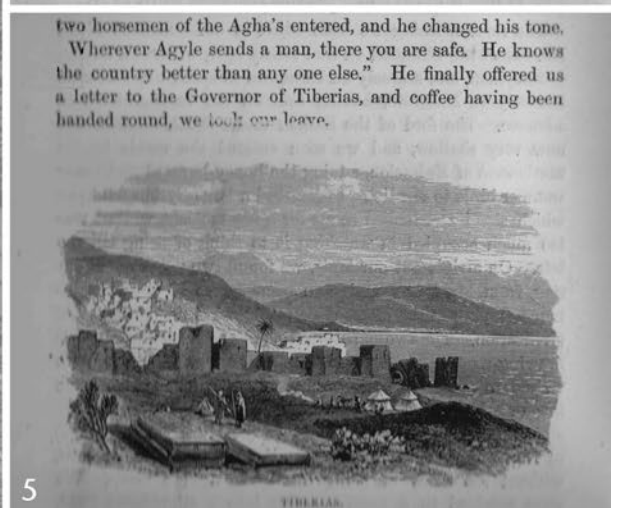
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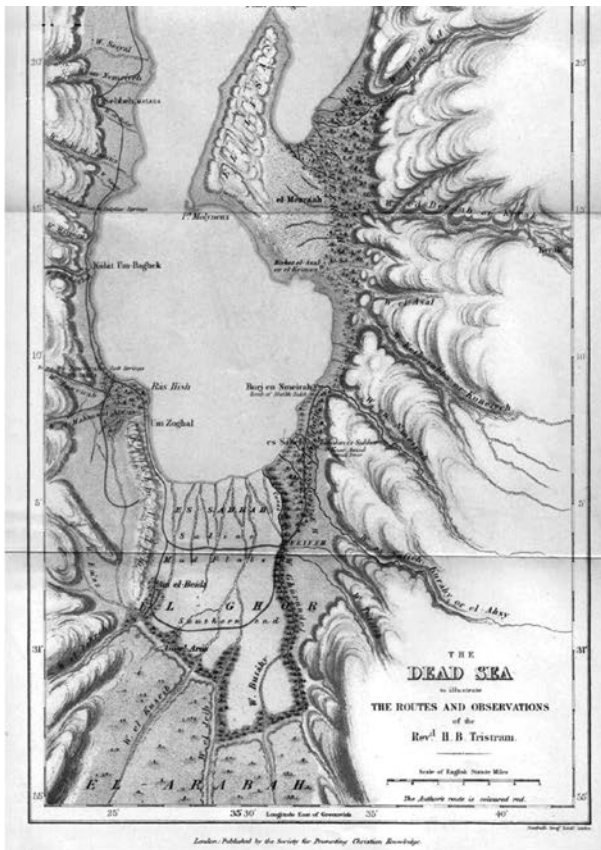


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5

B&W Plate 1: Fig. 1: First page of the 2nd (1866) edition of the "Land of Israel". Fig. 2: Henry Backer TRISTRAM in the Holy Land 1863–1864. Fig. 3: Mounted Adwân — notable Jordanian. Fig. 4: Hebron, 31. I.–6. II. 1864. Fig. 5: Tiberias, 21. III.–25. IV. 1864; these walls collapsed in the 11. VI. 1927 earthquake.



6



8

PLAINS OF JERICO. NORTH END OF DEAD SEA.



9

AT AIN FESHKHA.
NORTH WEST SIDE OF DEAD SEA.

7

ENGEDI, WITH SHUKIF.



10

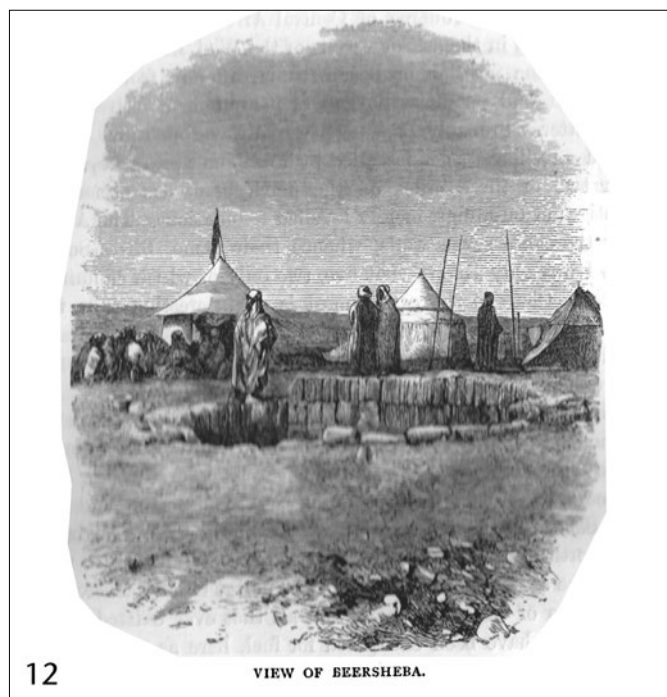
CROSSING THE JORDAN.



11

HUNTING BOARS IN MOAB.

B&W Plate 2: Fig. 6: Map of south Dead Sea with marks (thin black line) of TRISTRAM route along west coast and at south end. Fig. 7: Ein Gedi, Dead Sea coast with "Shukif" = Mount Yishai in the background, 16.–24. i. 1864. Fig. 8: Plains of Jericho, north end of Dead Sea, 29. XII.–4. i. 1864. Fig. 9: Ain Feshkha, north west side of Dead Sea, 11.–14. i. 1864. Fig. 10: Crossing the Jordan River at Qasr al-Yahud (the official name of baptism site) 26.–30. iv. 1864. Fig. 11: Hunting boars in Moab (Jordan) 26.–30. iv. 1864.



B&W Plate 3: Fig. 12: Be'er Sheva, 31. I. –6. II. 1864.

In both cases these specimens could not be located by the authors.

In 1897 HBT finally gave the entire collection of insects to the OUMNH. At this point the Lepidoptera were re-pinned, catalogued by POULTON and the following printed label added:

PALESTINE Capt. Sept '63 to July '64 by Canon TRISTRAM, or by O.P. CAMBRIDGE Jan.–Apr. 1865. Presented '97 by Canon TRISTRAM.

Each specimen was also assigned a unique number, recorded in the departmental accessions register (POULTON 1904) as follows, giving a total of 153 adult butterfly specimens, one butterfly pupa and 44 moths (see Col.-Pl. 2):

“1897/445 is *Danaï[s?]* *chrysippus*
 446–466 (both inclusive) are Satyridae
 467 to 499 (both inclusive) are Nymphalidae
 500 to 550 (both inclusive) are Lyceanidae
 551 to 569 (both inclusive) are Pieridae
 570 to 579 (both inclusive) are Papilionidae
 580 to 597 (both inclusive) are Hesperidae
 598 to 641 (both inclusive) are Heterocera
 642 is the pupa of a Pierine”

Notes on the collection and a more detailed list of the butterfly specimens were later compiled by AWPC, presumably at some time between 1897 and 1929 when he was employed as a tutor at Balliol College, Oxford (A. W. PICKARD-CAMBRIDGE [undated]). Although the title of the list is given as “O.P.-C's Palestine insects in Oxford Univ^y Museum” the list actually includes specimens also collected by TRISTRAM, for the reason discussed above.

AWPC's list comprises 124 specimens of 39 species in 5 families: “1) *Papilionidae* – 2 species (10 specimens).

2) *Pieridae* – 6 species (19 specimens). 3) *Nymphalidae* 13 species (21 specimens of *Nymphalinae* and *Danainae* and 21 specimens of *Satyrinae*), 4) *Lycaenidae* – 14 species (51 specimens) and 5) *Hesperiidae* – 4 species (18 specimens).” From an original number of 154 butterflies only 124 are listed by AWPC. It is impossible to explain this discrepancy, but it suggests that 30 specimens were either destroyed, discarded or lost (Tab. C).

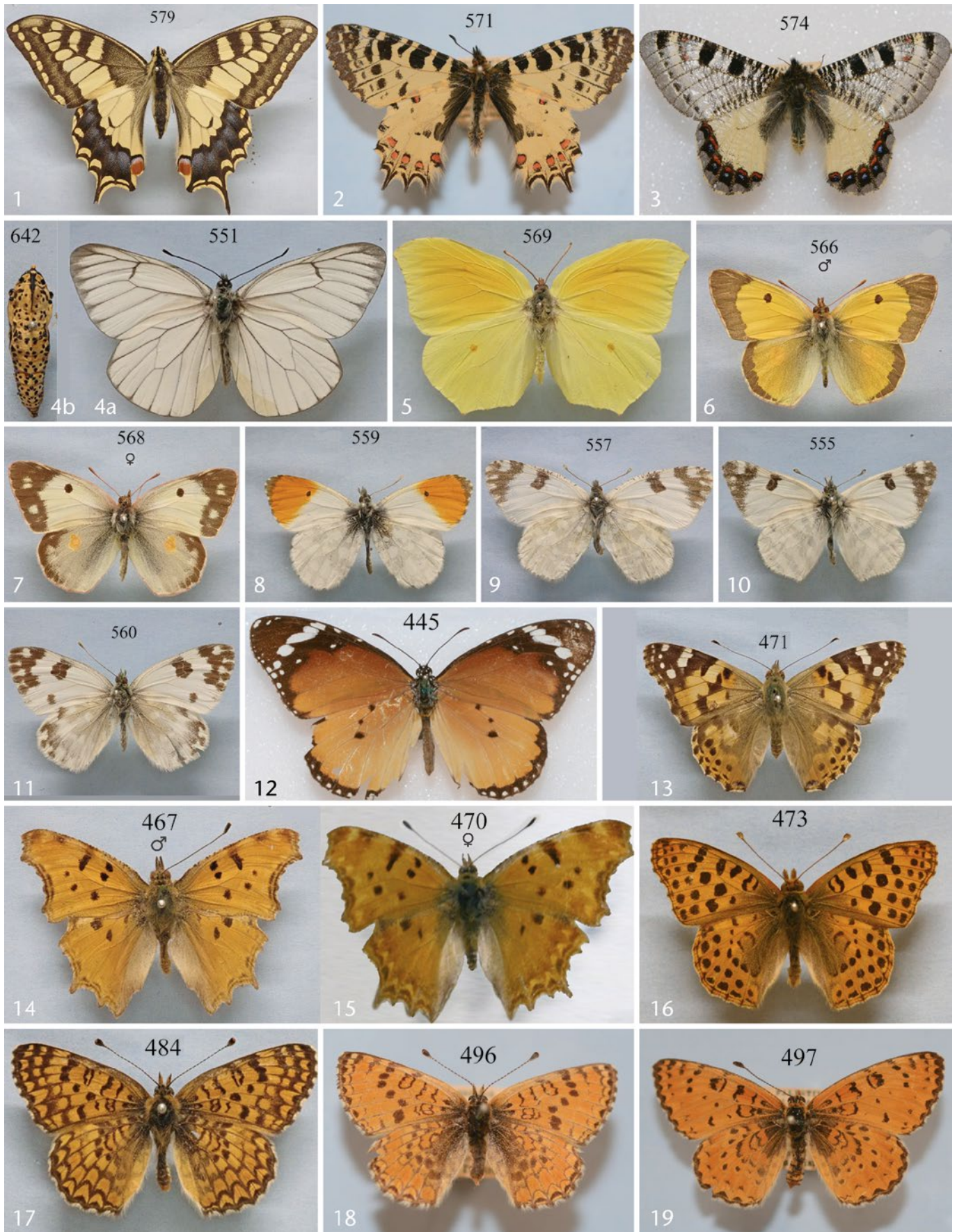
Tab. C: Summary of the TRISTRAM-CAMBRIDGE butterfly specimens in the OUMNH from 1897 to present. — **Comments:** * = POULTON (or his assistants) did not set 29 specimens; 153–29 = 124. He also possibly overlooked two *Archon apollinus* (Papilionidae). — ** = actual specimens located by the authors in the OUMNH.

Number of specimens			
(Sub-)Family	1897	AWPC's list*	June 2019**
Papilionidae	10	5	7
Pieridae	19	17	17
Danainae	1	1	1
Nymphalidae	33	34	29
Satyrinae	21	15	13
Lycaenidae	51	40	36
Hesperiidae	18	12	10
Total	153	124	113

The specimens were finally amalgamated into the main butterfly collection at the OUMNH and until now seem to have attracted little or no attention. For example, no mention of their existence is made by BODENHEIMER (1956) or BAKER (1996) when discussing the whereabouts of HBT's extensive natural history collections.

During a thorough search of the collection during five visits by DB between 2017 and 2020 we were able to locate 113 of these specimens, a representative sample of which were photographed (see Col.-Pls. 3 and 4).

Identification of 7 specimens of “*Melitaea phoebe*”, 7 “*Melitaea trivia*” and 9 “*Melitaea didyma*” proved a challenge and after comparison with Israeli material several abdomens of the most difficult specimens were taken to the world *Melitaea* expert Dr. John COUTSIS (Athens, Greece) for dissection and determination. The final *Melitaea* list totalled seven species including the recently discovered Mount Hermon endemic *Melitaea acentra* LUKHTANOV, 2017. An additional two species – *Pieris brassicae* and *P. rapae* – were observed in the field but apparently not collected (TRISTRAM 1882). Three species – *Limenitis reducta* STAUDINGER, *Celastrina argiolus* (LINNAEUS) and *Muschampia tessellum* (HÜBNER) – could not be located at the OUMNH even though they are present on the list compiled by AWPC (A. W. PICKARD-CAMBRIDGE [undated]). Applying current knowledge and nomenclature the number of species recorded increases from 39 to 51 (Tab. A).



Colour Plate 3: Representative specimens in the TRISTRAM-CAMBRIDGE butterfly collection, with the number of the accessions register of the OUMNH; part 1. — **Papilionidae:** Fig. 1: *Papilio machaon*. Fig. 2: *Allancastris deyrollei*. Fig. 3: *Archon apollinus*. — **Pieridae:** Fig. 4: *Aporia crataegi*; 4a: imago, 4b: pupal exuvia. Fig. 5: *Gonepteryx cleopatra*. Figs. 6–7: *Colias croceus*, 6: male, 7: female, f. *helicina*. Fig. 8: *Anthocharis cardamines*. Fig. 9: *Euchloe ausonia*. Fig. 10: *Euchloe beleamia*. Fig. 11: *Pontia daplidice*. — **Nymphalidae** (part): Fig. 12: *Danaus chrysippus*. Fig. 13: *Vanessa cardui*. Figs. 14–15: *Polygonia egea*, 14: male, 15: female. Fig. 16: *Issoria lathonia*. Fig. 17: *Melitaea telona*. Fig. 18: *Melitaea collina*. Fig. 19: *Melitaea syriaca*. — Specimens not to the same scale.

List of butterflies

To estimate collecting dates and localities for each species, information from HBT's book "*The Land of Israel. Journal of Travels in Palestine*" (1882 [4th revised ed.]), extracts from OPC's travel diary (A. W. PICKARD-CAMBRIDGE 1918) and locality data from OPC himself (1872) are combined with current data on the distribution and phenology (flight period) of each species in the Levant (LARSEN 1974, LARSEN & NAKAMURA 1983, BENYAMINI 2010, BENYAMINI & JOHN 2020, BENYAMINI 2020–2022 [in prep.]) (Tabs. B1a+b and B2a+b).

We consider it safe to assume that many if not most of the specimens will have been collected by members of the HBT expedition, particularly as HBT specifically refers to butterfly collecting and also given that HBT's expedition lasted over seven months longer than that of OPC.

For each species, following the name according to current nomenclature we added in parentheses the name used by AWPC in his manuscript list (different names only). Names of localities: given first is the name used by HBT or OPC followed by the name in present usage. The accession number assigned by POULTON at the OUMNH is given as found on each specimen, in the format '1897-[specimen number]'.

Papilionidae

Specimen illustrations see Col.-Pl. 3, Figs. 1–3.

1 *Papilio machaon* LINNAEUS, 1758. 1897-579 – a single specimen. This may be the specimen observed by HBT on the plain of Gennesaret on the NW coast of the Sea of Galilee between 1st and 8th March 1864 (TRISTRAM 1882: 422). Otherwise, this widely distributed species could have been collected anywhere along the routes taken by HBT or OPC.

2 *Allancastris deyrollei* (OBERTHÜR, 1869) (*Thais cerisyi* = *Allancastris cerisyi*). 1897-570, 1897-571, 1897-572, 1897-573 – three males and one female of this mountainous inland species could have been collected by HBT near Jerusalem between 26th and 30th April 1864 or in North Jordan near Ajlun-Dibbin between 1st and 7th May 1864 (TRISTRAM 1882: chapters 19, 22–25), or by OPC, locations A–B, D–G, I–N (Tab. B2a+b). This species was misidentified in AWPC's list (A. W. PICKARD-CAMBRIDGE [undated]).

3 *Archon apollinus* (HERBST, 1798) (*Parnassius apollinus*). 1897-574, 1897-576 – two males of this winter-flying species may have been collected between Nazareth and Tiberias on 26th February 1864 (TRISTRAM 1882: 407, or chapters 3–10, 15–26), or by OPC, locations A–B, D–N (Tab. B2a+b). These specimens were overlooked by AWPC and do not appear in his list.

Pieridae

(2 specimens not located) – See Col.-Pl. 3, Figs. 4–11.

4 *Pieris brassicae* (LINNAEUS, 1758) (*Pontia brassica*) – this common species was recorded by HBT on the plain of Gennesaret on the NW coast of the Sea of Galilee between 1st and 8th March 1864 (TRISTRAM 1882: 422).

5 *Pieris rapae* (LINNAEUS, 1758) (*Pontia rapi*) – this species, the commonest butterfly in the Levant, was observed by HBT on the plain of Gennesaret on the NW coast of the Sea of Galilee between 1st and 8th March 1864 (TRISTRAM 1882: 422).

6 *Gonepteryx cleopatra* (LINNAEUS, 1767) (*Gonepteryx cleopatrae*). 1897-569 – this single male is almost certainly the specimen captured by the HBT expedition on February 26th 1864 in oak forest near Nazareth (TRISTRAM 1882: 407).

7 *Colias croceus* (GEOFFROY, 1785) (*Colias edusa*). 1897-564, 1897-565, 1897-566, 1897-568 – three males and one female f. *helicina* OBERTHÜR. These specimens may be those that were observed by HBT on the plain of Gennesaret on the NW coast of the Sea of Galilee between 1st and 8th March 1864 (TRISTRAM 1882: 422). Alternatively, this species could have been collected anywhere along the routes taken by HBT or OPC.

8 *Euchloe ausonia* (HÜBNER, [1804]). 1897-556, 1897-557, 1897-558 – one male and two females of this common spring species were likely collected by HBT between 7th February and 18th June 1864 anywhere between Hebron and Beirut (TRISTRAM 1882: chapters 17–26), or at any point along OPC's route, locations A–Z (Tab. B2a+b).

9 *Euchloe belemia* (ESPER, 1800). 1897-553, 1897-554, 1897-555 – three males of this common annual spring species could have been collected by HBT anywhere between Hebron and Beirut during 7th February to 18th June 1864 (TRISTRAM 1882: chapters 17–26), or at any point along OPC's route, locations A–Z (Tab. B2a+b).

10 *Anthocharis cardamines* (LINNAEUS, 1758) (*Anthocharis cardaminis*). 1897-559 – a single male. This species was encountered by the HBT expedition on at least 2 occasions: on February 26th 1864 in oak forest near Nazareth (TRISTRAM 1865: 418) and on the Plain of Gennesaret between March 1st and 8th 1864 (TRISTRAM 1892: 422). However, this is a widespread species so could have been collected at other localities by HBT (Tab. B1a+b) or by OPC, locations I–II, IV–XV (Tab. B2a+b). Inexplicably, there is no mention of this species in AWPC's list.

11 *Pontia daphidice* (LINNAEUS, 1758) (*Synchlora daphidice*). 1897-560, 1897-561, 1897-562 – two males and one female. Although less common in the winter months of December and January, this species can be observed year-round and could have been collected anywhere along the routes taken by HBT or OPC.

12 *Aporia crataegi* (LINNAEUS, 1758). 1897-551, 1897-552, 1897-642 – two males and one pupa of this single-brooded migratory species could have been collected between Central Israel and Central Jordan to Beirut from March to June 1864 (TRISTRAM 1882, chapters 18–26, Tab. B1a+b), or by OPC, locations IV–VII, XI–XV (Tab. B2a+b).

Nymphalidae

Danainae – See Col.-Pl. 3, Fig. 12.

13 *Danaus chrysippus* (LINNAEUS, 1758) (*Danais chrysippus*). 1897-445 – this single female is almost certainly the specimen referred to by TRISTRAM at Ein Gedi/Ain Jidy, Engedi on 22nd January 1864 (1882: 407): "One butterfly, a species belonging to Nubia, and apparently connected with the osher plant, we never found elsewhere."

Nymphalinae s.l. (4 specimens not located) – See Col.-Pl. 3, Figs. 13–19; Col.-Pl. 4, Figs. 20–23.

14 *Limenitis reducta* STAUDINGER, 1901 (*Limenitis camilla*). 1897-472?, 1897-473? – these two specimens may have originated from Central or North Israel, North Jordan to Central and South Lebanon between 10th March and 18th June 1864 (TRISTRAM 1882: chapters 20–26, Tab. B1a+b), or have been collected by OPC, locations V–XI, XI–XV (Tab. B2a+b). These specimens were not located in the collection.

15 *Vanessa cardui* (LINNAEUS, 1758) (*Pyrameis cardui*). 1897-471 – TRISTRAM (1882: 422) records this species from the Plain of Gennesaret between March 1st and 8th 1864, and this is the likely origin of this specimen.

16 *Polygonia egea* (CRAMER, 1775) (*Grapta egea*). 1897-467, 1897-468, 1897-470 – three males and one female were probably collected in Jerusalem where this nymphalid is common on old walls and buildings upon which grow its usual hostplant *Parietaria judaica* (Urticaceae). It should not be ruled out that it was collected inside other historical cities, for example Tiberias. We estimate that they were collected between 26th February and 18th June 1864 from central and north Israel and Jordan to south and

Table A: Updated summary of the present-day contents of the TRISTRAM/PICKARD-CAMBRIDGE butterfly collection at the OUMNH. — **Abbreviated remarks:** id = wrong original identification. lit = reported by TRISTRAM, not collected. nl = specimen/specimens not located. ol = overlooked by POULTON. — **Additional remarks:** accession numbers of specimens not located in the collection (n = 40): Papilionidae: 575, 577, 578 (n = 3); Pieridae: 563, 567 (n = 2); Nymphalidae: 469, 472, 473, 488 (n = 4); Lycaenidae: 504, 505, 506, 510, 515, 516, 517, 518, 519, 524, 535, 536, 540, 543, 544 (n = 15); Hesperiidae: 581, 582, 583, 589, 592, 593, 594, 595 (n = 8).

No.	Name in Poulton's list	Correct present name	No. of specimens	Registration number 1897	Remarks
Papilionidae					
1	<i>Papilio machaon</i>	<i>Papilio machaon</i> LINNAEUS, 1758	1	579	
2	<i>Thais cerisyi</i>	(= <i>Allancastris cerisyi</i>) actually <i>Allancastris deyrolleyi</i> (OBERTHÜR, 1869)	4	570, 571, 572, 573	id
3	—	(<i>Parnassius apollinus</i> =) <i>Archon apollinus</i> (HERBST, 1798)	2	574, 576	ol, lit
Pieridae					
4	—	<i>Pontia brassica</i> = <i>Pieris brassicae</i> (LINNAEUS, 1758)			lit
5	—	<i>Pontia rapi</i> = <i>Pieris rapae</i> (LINNAEUS, 1758)			lit
6	<i>Gonepteryx cleopatra</i>	<i>Gonepteryx cleopatra</i> (LINNAEUS, 1767)	1	569	
7	<i>Colias edusa</i>	<i>Colias croceus</i> (GEOFFROY, 1785)	(5) 4	564, 565, 566, 568	nl
8	<i>Euchloe ausonia</i>	<i>Euchloe ausonia</i> (HÜBNER, [1804])	3	556, 557, 558	
9	<i>Euchloe belemia</i>	<i>Euchloe belemia</i> (ESPER, 1800)	3	553, 554, 555	
10	—	<i>Anthocharis cardamines</i> (LINNAEUS, 1758)	1	559	lit
11	<i>Synchlora daplidice</i>	<i>Pontia daplidice</i> (LINNAEUS, 1758)	3	560, 561, 562	
12	<i>Aporia crataegi</i>	<i>Aporia crataegi</i> (LINNAEUS, 1758)	2 + pupa	551, 552 + 642	
Nymphalidae					
13	<i>Danaus chryippus</i>	<i>Danaus chryippus</i> (LINNAEUS, 1758)	1	445	
14	<i>Limenitis camilla</i>	(= most likely <i>Limenitis reducta</i> STAUDINGER, 1901)	2	472?, 473?	nl
15	<i>Pyrameis cardui</i>	<i>Vanessa cardui</i> (LINNAEUS, 1758)	1	471	
16	<i>Grapta egea</i>	<i>Polygonia egea</i> (CRAMER, 1775)	(4) 3	467, 468, 470	nl
17	<i>Melitaea phoebe</i>	actually <i>Melitaea telona</i> FRUHSTORFER, 1908	(7) 5	484, 485, 486, 487, 489	id
18	—	<i>Melitaea collina</i> LEDERER, 1861	4	493, 495, 496, 498	id
19	<i>Melitaea trivia</i>	<i>Melitaea (trivia) syriaca</i> REBEL, 1905	(7) 2	494, 497	id
20	<i>Melitaea didyma</i>	<i>Melitaea didyma</i> (LANG, 1789)	(9) 1	499	
21	—	<i>Melitaea acentria</i> LUKHTANOV, 2017	3	481, 482, 483	id
22	—	<i>Melitaea deserticola</i> OBERTHÜR, 1909	3	478, 479, 480	id
23	—	<i>Melitaea cinxia</i> (LINNAEUS, 1758)	3	490, 491, 492	id
24	<i>Argynnis lathonia</i>	<i>Issoria lathonia</i> (LINNAEUS, 1758)	4	474, 475, 476, 477	
25	<i>Coenonympha pamphilus</i>	<i>Coenonympha pamphilus</i> (LINNAEUS, 1758)	2	457, 458	
26	<i>Eumenis telephassa</i>	<i>Pseudochazara telephassa</i> (GEYER, [1827])	(1) 2	448, 449	
27	<i>Eumenis anthelea</i>	(= <i>Pseudochazara anthelea</i> (HÜBNER, [1824])) actually <i>Chazara persephone</i> (HÜBNER, [1805])	(2) 1	447	nl
28	<i>Melanargia titea</i> var. <i>palestinensis</i>	<i>Melanargia titea titea</i> (KLUG, 1832)/ <i>M. t. titania</i> CALBERLA, 1891	(8) 6	459, 460, 462, 463, 464, 466	nl
29	<i>Epinephele telmessia</i>	<i>Maniola telmessia</i> (ZELLER, 1847)	2	453, 454	
Lycaenidae					
30	<i>Cupido astrarche</i>	<i>Aricia agestis</i> ([DENIS & SCHIFFERMÜLLER], 1775)	2	537, 538	
31	<i>Lycaena loewii</i> (and var. <i>gigas</i>)	<i>Plebejidea loewii</i> (ZELLER, 1847)	(10) 2	513, 514	nl
32	<i>Lycaena amanda</i>	<i>Neolysandra amanda</i> (SCHNEIDER, 1792)	1	507	
33	<i>Lycaena anteros</i>	<i>Aricia anteros</i> (FREYER, 1838)	2	520, 521	
34	<i>Lycaena theophrastus</i>	(= <i>Tarucus theophrastus</i>) actually <i>Tarucus rosaceus</i> AUSTAUT, 1885	(3) 2	539, 541	nl
35	<i>Lycaena semiargus</i> var. <i>antiochena</i>	<i>Cyaniris semiargus</i> (ROTTEMBURG, 1775) ssp. <i>antiochena</i>	3	529, 530, 531	
36	<i>Lycaena galba</i>	(= <i>Lachides galba</i>) actually <i>Zizeeria karsandra</i> (MOORE, 1865)	1	542	
37	<i>Scolitantides hylas</i>	(= <i>Pseudophilotes baton</i>) actually <i>Pseudophilotes vicrama</i> (MOORE, 1865)	3	532, 533, 534	
38	<i>Chilades trochilus</i>	<i>Freyeria trochilus</i> (FREYER, 1844)	6	545, 546, 547, 548, 549, 550	
39	<i>Cyaniris argiolus</i>	<i>Celastrina argiolus</i> (LINNAEUS, 1758)	2		nl
40	<i>Polyommatus baeticus</i>	<i>Lampides boeticus</i> (LINNAEUS, 1767)	2	508, 509	
41	—	<i>Polyommatus icarus</i> (ROTTEMBURG, 1775)	2	522, 523	ol
42	<i>Chrysophanus thersamon</i>	<i>Lycaena thersamon</i> (ESPER, 1784)	2	502, 503	
43	<i>Chrysophanus phlaeas</i>	<i>Lycaena phlaeas</i> (LINNAEUS, [1760])	2	500, 501	

No.	Name in Poulton's list	Correct present name	No. of specimens	Registration number 1897	Remarks
44	<i>Epamera jordanus</i>	<i>Epamera glaucus</i> BUTLER, [1886]	1	511	
45	—	<i>Plebejides nicholli nicholli</i> (ELWES, 1901)	4	512, 525, 526, 527	ol
46	—	<i>Kretenia eurypilus</i> (FREYER, 1851)	1	528	ol
Hesperiidae					
47	<i>Thanaos peleas</i>	(= <i>Erynnis pelias</i> ?) actually <i>Erynnis marloyi</i> (BOISDUVAL, 1834)	1	596	
48	<i>Hesperia orbifer</i>	<i>Spialia orbifer</i> (HÜBNER, [1823])	(6) 5	583, 584, 585, 590, 591	nl
49	<i>Hesperia tessellum</i>	<i>Muschampia tessellum</i> (HÜBNER, [1803])	2		nl
50	<i>Hesperia alveus</i>	(= <i>Pyrgus alveus</i>) actually <i>Pyrgus armoricanus</i> (OBERTHÜR, 1910)	3	586, 587, 588	
51	—	<i>Thymelicus sylvestris</i> (PODA, 1761)	1	597	ol

central Lebanon (TRISTRAM 1882: chapters 18–26, Tab. B-1), or by OPC, locations IV–VII, X–XV (Tab. B2a+b).

17 *Melitaea telona* FRUHSTORFER, 1908 (*Melitaea phoebe*). 1897-484, 1897-485, 1897-486, 1897-487, 1897-489 — two males and four females of this seasonally common species were probably collected between 7th February and 19th June 1864 from Hebron and Amman northwards to Lebanon (TRISTRAM 1882: chapters 17–26, Tab. B1a+b), or by OPC, locations III–XVI (Tab. B2a+b).

18 *Melitaea collina* LEDERER, 1861 (*Melitaea didyma*). 1897-493, 1897-495, 1897-496, 1897-498 — one male and three females of this single brooded, uncommon, mountainous species were possibly collected between the end of March 1864 and July 1864 above approximately 350 m (TRISTRAM 1882: chapters 24–26, Tab. B1a+b) or by OPC, locations XII–XV (Tab. B2a+b).

19 *Melitaea syriaca* REBEL, 1905 (*Melitaea trivialis*). 1897-494, 1897-497 — one male and one female of this common, multi-brooded *Melitaea* species were collected. Possible dates range from 26th February to 18th June 1864 from central and North Israel and Jordan to Lebanon by HBT (TRISTRAM 1882: chapters 18–26, Tab. B1a+b), or by OPC, locations III–XVI (Tab. B2a+b).

20 *Melitaea didyma* (LANG, 1789) (*Melitaea didyma*). 1897-499 — one specimen of this multi-brooded species was possibly collected between mid-March and July 1864 in N Israel or S/C Lebanon (TRISTRAM 1882: chapters 24–26, Tab. B1a+b), or by OPC, locations XII–XVI (Tab. B2a+b).

21 *Melitaea acentria* LUKHTANOV, 2017 (*Melitaea didyma*). 1897-481, 1897-482, 1897-483 — three males. This species is externally very similar to *M. didyma* and was identified by dissection. Because this species is endemic to Mount Hermon (LUKHTANOV 2017) we can provide a good estimate of collecting data, between 3rd and 4th of June 1864 by HBT (TRISTRAM 1882: 595–604). Although OPC visited Mt. Hermon in early May 1865 (PICKARD-CAMBRIDGE 1872, A. W. PICKARD-CAMBRIDGE 1918), we are confident he did not collect these specimens; his route was confined to the skirts of the mountain, while *M. acentria* occurs at high altitude above 1730 m (LUKHTANOV 2017).

22 *Melitaea deserticola* OBERTHÜR, 1909 (*Melitaea trivialis*). 1897-478, 1897-479, 1897-480 — three specimens (probably females) of this widespread but uncommon bivoltine species were collected between mid-February and 18th June 1864, probably in central or northern Israel and Jordan or in Lebanon up to an altitude of 1800 m (TRISTRAM 1882: chapters 18–26, Tab. B1a+b), or by OPC, locations III–XVI (Tab. B2a+b).

23 *Melitaea cinxia* (LINNAEUS, 1758) (*Melitaea didyma*). 1897-490, 1897-491, 1897-492 — two males were almost certainly collected at altitudes of 1200 m and above while climbing Mt. Hermon on 3rd–4th June 1864 (TRISTRAM 1882: 595–604, Tab. B1a+b). It is unlikely OPC collected these specimens as his route was confined to Mt. Hermon's lower slopes (PICKARD-CAMBRIDGE 1872, A. W. PICKARD-CAMBRIDGE 1918).

24 *Issoria lathonia* (LINNAEUS, 1758) (*Argynnis lathonia*). 1897-474, 1897-475, 1897-476, 1897-477 — these four specimens will have been collected from upper elevations (above approximately 900 m) either in North Galilee, Mt. Hermon or Lebanon between 8th May and 18th June 1864 (TRISTRAM 1882: chapters 24–26, Tab. B1a+b), or by OPC, locations XIII–XV (Tab. B2a+b).

Satyrinae (8 specimens not located) — See Col.-Pl. 4, Figs. 24–30.

25 *Coenonympha pamphilus* (LINNAEUS, 1758). 1897-457, 1897-458 — two females of this small satyrine were probably collected from wet areas in the Beqaa (Baalbek) South-East Lebanon internal valley, either by HBT between 28th May and 18th June 1864 (TRISTRAM 1882: chapters 25–26, Tab. B1a+b), or by OPC in early May 1865, location XV (Tab. B2a+b).

26 *Pseudochazara telephassa* (GEYER, [1827]) (*Eumenis telephassa*). 1897-448, 1897-449 — AWPC records only a single specimen (A. W. PICKARD-CAMBRIDGE [undated]), but one male and one female were located in the collection. This late spring to summer flying species was likely collected by HBT between April and June 1864 in the mountainous parts of their route in Israel, Jordan or Lebanon (TRISTRAM 1882: chapters 18–26, Tab. B1a+b), or by OPC, locations IV–XV (Tab. B2a+b).

27 *Chazara persephone* (HÜBNER, [1805]) (*Eumenis anthelea* = *Pseudochazara anthelea*). 1897-447 — one female of this cryptic species of the Mediterranean forests of the Levant exists in the collection. It can be common above 1000 m in the Lebanon and Anti-Lebanon mountain ranges, therefore possibly collected between 1st May and 18th June 1864 in N Israel, N Jordan, but more likely in the Lebanese mountains (TRISTRAM 1882: chapters 23–26, Tab. B1a+b), or by OPC, locations XII–XV (Tab. B2a+b). — The two “*anthelea*” specimens that appear in AWPC's list could not be located. LEDERER (1855: 179) recorded this species in the butterfly list of KINDERMANN from July 1848 in Lebanon and ELLISON & WILTSHIRE (1939: 13) stated that it was “recorded by LEDERER

Colour Plate 4: Representative specimens in the TRISTRAM-CAMBRIDGE butterfly collection, with the number of the accessions register of the OUMNH; part 2. — **Nymphalidae** (continued): **Fig. 20:** *Melitaea didyma*. **Fig. 21:** *Melitaea acentria*. **Fig. 22:** *Melitaea deserticola*. **Fig. 23:** *Melitaea cinxia*. **Fig. 24–25:** *Melanargia titea*; **24:** *M. t. titania*, **25:** *M. t. titea*. **Fig. 26:** *Chazara persephone*. **Fig. 27–28:** *Pseudochazara telephassa*; **27:** male, **28:** female. **Fig. 29:** *Maniola telmessia*. **Fig. 30:** *Coenonympha pamphilus*. — **Lycaenidae:** **Fig. 31:** *Lycaena phlaeas*. **Figs. 32–33:** *Lycaena thersamon*; **32:** male, **33:** female. **Fig. 34:** *Epamera glaucus*. **Fig. 35:** *Lampides boeticus*. **Fig. 36:** *Freyeria trochilus*. **Fig. 37:** *Aricia agestis*. **Fig. 38:** *Aricia anteros*. **Figs. 39–40:** *Polyommatus icarus*; **39:** male, **40:** female. **Figs. 41–42:** *Plebejidea loewei*; **41:** male, **42:** female. **Figs. 43–44:** *Plebejides nicholli*; **43:** male, **44:** female. **Fig. 45:** *Kretania eurypilus*. **Fig. 46:** *Neolysandra amanda*. **Fig. 47:** *Cyaniris antiochena*. **Figs. 48–49:** *Pseudophilotes vicrama*; **48:** male, **49:** female. **Fig. 50:** *Tarucus rosaceus*. **Fig. 51:** *Zizeera karsandra*. — **Hesperiidae:** **Fig. 52:** *Erynnis marloyi*. **Fig. 53:** *Pyrgus armoricanus*[?]. **Fig. 54:** *Spialia orbifer*. **Fig. 55:** *Thymelicus sylvestris*. — Specimens not to the same scale.

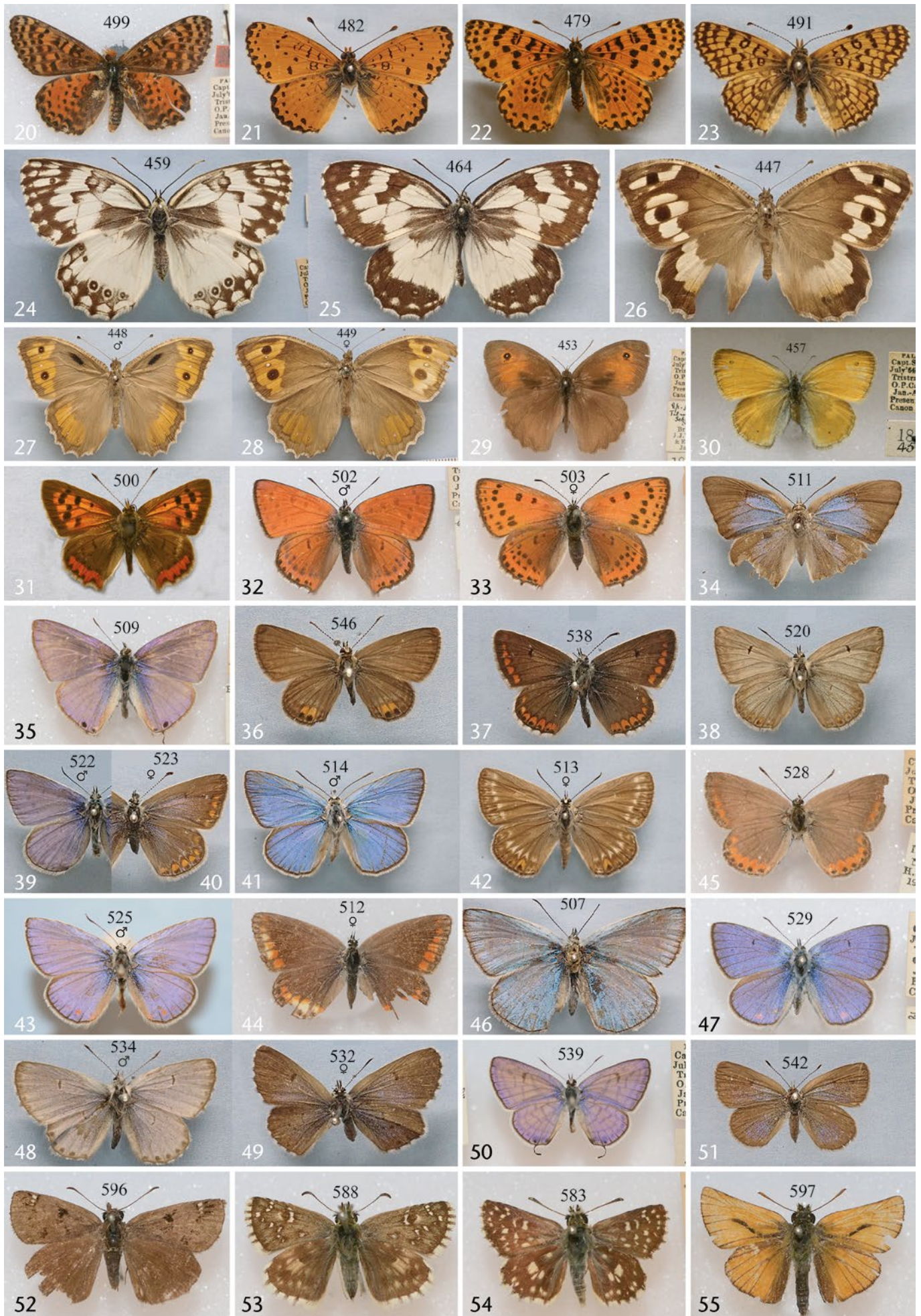


Table B1a: Estimated butterfly collecting localities of TRISTRAM expedition 1863–1864. — **Abbreviations:** v = normal flight period. p = possible occurrence. * = mentioned in the text. — **Locality codes A–Z** of TRISTRAM (1882) see in **Table B1b** below.

No.	Family/Species \ Locality codes A–Z for Tristram (1882)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Papilionidae																											
1	<i>Papilio machaon</i>	v	v	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	v*	v	v	v	v	v	v	v	v
2	<i>Allancastris deyrolleyi</i>																			p			v	v	v	v	
3	<i>Archon apollinus</i>			p	p	p	p	p	v	v	v					p	v	v	v*	v	v	v	v	v	v	v	v
Pieridae																											
4	<i>Pieris brassicae</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v*	v	v	v	v	v	v	v	v
5	<i>Pieris rapae</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v*	v	v	v	v	v	v	v	v
6	<i>Gonepteryx cleopatra</i>	p	p																v*	v	v	v	v	v	v	v	v
7	<i>Colias croceus</i>	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	v*	v	v	v	v	v	v	v	v
8	<i>Euchloe ausonia</i>															p	v	v	v	v	v	v	v	v	v	v	v
9	<i>Euchloe belemia</i>			p	p	p	p	p	p	p	p	p	p	p	p	p	p	v	v	v	v	v	v	v	v	v	v
10	<i>Anthocharis cardamines</i>																	v	v*	v	v	v	v	v	v	v	v
11	<i>Pontia daplidice</i>	v	v							p	p	p	p	p	p	p	p	v	v	v	v	v	v	v	v	v	v
12	<i>Aporia crataegi</i>																		p	p	p	v	v	v	v	v	v
Nymphalidae																											
13	<i>Danaus chryippus</i>	p	p											v*	v	v	v	v	v	v	v	v	v	v	v	v	p
14	<i>Limenitis reducta</i>																				y	y	y	p	y	y	v
15	<i>Vanessa cardui</i>	v	v	p												p	p	v*	v	v	v	v	v	v	v	v	v
16	<i>Polygonia egea</i>																	v	p	p	y	y	p	v	v	v	
17	<i>Melitaea telona</i>																p	v	v	v	v	v	v	v	v	v	v
18	<i>Melitaea didyma</i>																								v	v	v
19	<i>Melitaea (trivia) syriaca</i>																	v	v	v	v	v	v	v	v	v	v
20	<i>Melitaea collina</i>																								v	v	v
21	<i>Melitaea cinxia</i>																								v	v	v
22	<i>Melitaea deserticola</i>																	v	v	v	v	v	v	v	v	v	v
23	<i>Melitaea acentria</i>																								v	v	v
24	<i>Issoria lathonia</i>																								v	v	v
25	<i>Coenonympha pamphilus</i>																									p	v
26	<i>Pseudochazara telephassa</i>																	p	p	v	v	v	v	v	v	v	v
27	<i>Chazara persephone</i>																							p	v	v	v
28	<i>Melanargia titea titea/titania</i>																				v	v	v	v	v	v	v
29	<i>Maniola telmessia</i>																	p	v	v	v	v	v	v	v	v	v
Lycaenidae																											
30	<i>Aricia agestis</i>	p	p														p	v	v	v	v	v	v	v	v	v	v
31	<i>Plebejidea loewii</i>																					v	v	v			
32	<i>Neolysandra amanda</i>																							p	v	v	v
33	<i>Aricia anteros</i>																	v	v	v	v	v	p	v	v	v	v
34	<i>Tarucus rosaceus</i>	p	p													p	p	v	v	v	v	v	v	v	v	v	v
35	<i>Cyaniris semiargus antiochena</i>																								v	v	v
36	<i>Zizeeria karsandra</i>	v	v						p	p	p	p	p	p	p	p	v	v	v	v	v	v	v	v	v	v	v
37	<i>Pseudophilotes vicrama</i>	p	p														p	p	v	v	v	v	v	v	v	v	v
38	<i>Freyeria trochilus</i>	p	p														p	p	v	v	v	v	v	v	v	v	v
39	<i>Celastrina argiolus</i>																								v	v	v
40	<i>Lampides boeticus</i>	v	v						p	p	p	p	p	p	p	p	v	v	v	v	v	v	v	v	v	v	v
41	<i>Polyommatus icarus</i>	v	v														p	p	v	v	v	v	v	v	v	v	v
42	<i>Lycaena thersamon</i>	v	v						p	p	p	p	p	p	p	p	p	p	v	v	v	v	v	v	v	v	v
43	<i>Lycaena phlaeas</i>	v	v						p	p	p	p	p	p	p	p	p	p	v	v	v	v	v	v	v	v	v
44	<i>Epamera glaucus</i>										p	p	p	p	p	p						v	p				
45	<i>Plebejides nicholli nicholli</i> (<i>P. n. cleopatra</i> ?)																p	p		v	p	v	p	p	v	v	v
46	<i>Kretania eurypilus</i>																									v	v
Hesperiidae																											
47	<i>Erynnis marloyi</i>																									v	p
48	<i>Spialia orbifer</i>	v	v																v	v	v	v	v	v	v	v	v
49	<i>Muschampia tessellum</i>																					v	v	p	v	v	v
50	<i>Pyrgus armoricanus</i>																									v	v
51	<i>Thymelicus sylvestris</i>																	p	v	v	v	v	v	v	v	v	v

Table B1b: Locality codes A–Z of TRISTRAM (1882) as used above in Table B1a.

Location	Date ([day]. month. year)	Data
A	x. 1863	Beyrout, Turkish Syria
B	x. 1863	S. of Beyrout, Phoenician shore, Sidon, Nabi Yunas
C	2.–5. XII. 1863	Tyre, Sarafand (Surafend, Sarepta), Ras en Nakura
D	6.–8. XII. 1863	El Bussah (Betzet), Montfort Fortress (Castle of Kurn), Kziv river
E	9.–13. XII. 1863	Acre, Caiffa (Haifa), Kishon river (marshes), Carmel Mt.
F	15.–19. XIII. 1863	S. Carmel, Esfia, Mukrakah, Lower Galilee, Nazareth, Jokneam, Mt. Tavor, Plain of Esdraelon, Endor, Yizrael valley, Gilboa, Sebustiyeh (Samaria), Jenin
G	20.–22. XII. 1863	Nablous (Shhem), Gerizim and Ebal Mts.
H	23.–28. XII. 1863	Plain of Shechem, Shiloh, Bethel, Michmash, Jerusalem
I	29. XII. 1863, 4. I. 1864	Jerusalem, Jericho, Wilderness (Desert) of Judaea, Wady Kelt, Ein Sultan, Gorge of the Kedron at Marsaba Convent
J	5.–14. I. 1864	Jericho, Gilgal, Wady Kelt, Deir Hajla, Jordan river, Nabi Musa
K	11.–14. I. 1864	lower Jordan valley, Phasaelis (Patzael), Kurn Surtabeh, Jordan river, Dead Sea shore, Ein Peshha (Ras Feshkhali)
L	15.–20. I. 1864,	Convent of Mar Saba, Ras Feshkhah, Ein Ghuweir, Ein Terabeh, Eingidy (Ein Gedi)
M	16.–24. I. 1864	Ein Gedi, Jebel Shukif (Mt. Yishay)
N	25.–27. I. 1864	Ein Gedi, Masada, Um Bagkhek (Ein Bokek), Wadi Zuweirah (Ein Zohar), Jebel Usdum (Mt. Sdom)
O	28.–30. I. 1864	Jebel Usdum (Mt. Sdom), Oasis of Feifeh (Fifa), Ghor es Safieh, Jericho, Zoar
P	31. I.–6. II. 1864	Dead sea, Judean desert, N. Negev, Beer Sheva, Jatir (Yatir), Susieh (Sus'ya), Maon, Hebron
Q	7.–25. II. 1864	Hebron, Dera (Adoraim), Solomon's pools, Adullam, Bethlehem, Jerusalem, Ramleh, Jafa, Plains of Ephraim, Nazareth

Location	Date ([day]. month. year)	Data
R	26. II.–8. III. 1864	Nazareth, Mt. Tabot, Yavniel, Tiberis, Magdala, Ein Tabigah–Bethsaide, (Tabha), Tell Hum (Kfar Nahum), Chorazim
S	9.–12. III. 1864	Plain of Gennesaret (Genosar), Arbel, Wadi Leimun (Amud), Wadi Bireh (Tavor?), Castle of Belfort (Monfort), Yarmuk–Hieromax (Yarmuch), Um Keis, Gadara (Hamat Gader), Oaks of Bashan (Golan), Taiyibeh, Tibneh
T	10.–20. III. 1864	Tibneh (NW Ajlun), Jarash, Gilead, Jabbok, river, Ajlun forest, Moab, Mahanaim, Wady Taiyibeh (Taiyiba), Sh. Husein bridge, Nazereth, Chaiffa
U	21. III.–25. IV. 1864	Carmel, Isfia, Kfar Kana, Nazereth, Megdel, Tiberis, Wady Bire (Harod), Tavor, Bet She'an, Gilboa, Nuris (Nurit) Nablus, Ramalah, Jerico, Wady Kelt, Dead Sea, El Jib (Giv'on) Nabi Samwil–Mitzpe, Jerusalem
V	26.–30. IV. 1864	Jerusalem, Ein Sultan, Kaser el Yahud, Shunat Nimrin, Kafrein, Hisban (N Madaba), Mt. Nebo
W	1.–7. V. 1864	Hisban, Amman, Rabbh (Amman), Salt, Jabbok, Ajlun forest, Jarash, Dibbin, Bet Idis, Phail (Palla), Wady Taiyibeh, Sh. Husein bridge
X	8.–27. V. 1864	Nazareth, Gennesaret (Genosar) Lake of Galilee, Safed (Tzfet), Kedes Naphtali, upper Jordan river, Tel el Kady (Tel Dan), Castle of Banias (Kal'at Namrud), Lake Phiala (Birket Ram), marshes of the Hula
Y	28. V.–10. VI. 1864	Hula Lake, Belfort S. Lebanon (Beaufort), Leontes (Litani river), Hasbeiya (Hasbaiya), Rasheiya (Rachaiya), Mt. Hermon, Damascus
Z	11.–18. VI. 1864	Damascus, Bludan, Zebdany, Baalbec, Antilebanon, Jebel Arz, Cedar Mts, B'sherreh (Bcharre), Jebil (Byblos = Jbeil), B'hamdun, Ein Zahalteh, Naher el Kelb, Beirut

without comment or locality [and thus] not confirmed". Indeed it had never been recorded again from Lebanon, so this erroneous record is possibly a misidentification of *Chazara persephone*.

28 *Melanargia titea titea* (KLUG, 1832) and *M. t. titania* CALBERLA 1891 (*Melanargia titea* var. *palestinensis*). 1897-459, 1897-460, 1897-462, 1897-463, 1897-464, 1897-466 – four males and two females of this seasonal and very common satyrine were collected, including the Lebanese dark nominotypical ssp *titea* (three specimens) and the brighter ssp. *titania* from Israel. This material was possibly collected between early April to 18th June 1864 in C to N Israel and Jordan and S Lebanon (TRISTRAM 1882: chapters 21–26, Tab. B1a+b), or by OPC, locations IV–XV (Tab. B2a+b).

29 *Maniola telmessia* (ZELLER, 1847) (*Epinephele telmessia*). 1897-453, 1897-454 – two males were probably taken between mid-February in the Upper Jordan Valley to mid June 1864 at the upper heights of the Lebanon and Anti-Lebanon mountain ranges (TRISTRAM 1882: chapters 17–26, Tab. B1a+b), or by OPC, locations IV–XVI (Tab. B2a+b).

Lycaenidae

(15 specimens not located) – See Col.-Pl. 4, Figs. 31–51.

30 *Aricia agestis* ([DENIS & SCHIFFERMÜLLER], 1775) (*Cupido astrarche*). 1897-537, 1897-538 – one male and one female of this uncommon species were likely to have been collected between March and 18th June 1864 in C to N Israel, N Jordan or in the Lebanese mountain ranges (TRISTRAM 1882: chapters 18–26, Tab. B1a+b), or by OPC, locations IV–XVI (Tab. B2a+b).

31 *Plebejidea loewii* (ZELLER, 1847) (*Lycaena loewii* and *L. l. var. gigas*). 1897-513, 1897-514 – one male and one brown female of this species were located in the collection, although AWPC records a further eight specimens. This typical late-spring desert blue was probably collected between March and May 1864 while HBT crossed the Samaritan Desert of East Israel, descended to the Rift Valley around the Dead Sea and crossed S Jordan River eastwards near Jericho to the Irano-Turanian steppe vegetational belt of western East Jordan (TRISTRAM 1882: chapters 21–23, Tab. B1a+b), or by OPC in the vicinity of Jericho between 30th March and 6th April 1865 at location III (Tab. B1a+b).

Table B2a: Estimated butterfly collecting localities of the Octavius PICKARD-CAMBRIDGE expedition March–May 1865. — **Abbreviations:** v = normal flight period. ? = possible occurrence. — **Locality codes I–XVI** see in Table B2b below.

No.	Family/Species \ Locations I–XVI	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI
Papilionidae																	
1	<i>Papilio machaon</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
2	<i>Allancastris deyrolleyi</i>				v	v	v	v		v	v	v	v	v	v	v	
3	<i>Archon apollinus</i>	v	v		v	v	v	v	v	v	v	v	v	v	v	v	
Pieridae																	
4	<i>Pieris brassicae</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	<i>Pieris rapae</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
6	<i>Gonepteryx cleopatra</i>				v	v	v	v	v	v	v	v	v	v	v	v	v
7	<i>Colias croceus</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
8	<i>Euchloe ausonia</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
9	<i>Euchloe belemia</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
10	<i>Anthocharis cardamines</i>	v	v		v	v	v	v	v	v	v	v	v	v	v	v	
11	<i>Pontia daplidice</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
12	<i>Aporia crataegi</i>				v	v	v	v				v	v	v	v	v	
Nymphalidae																	
13	<i>Danaus chryippus</i>			v					v		v						
14	<i>Limenitis reducta</i>					v	v	v	v	v		v	v	v	v	v	
15	<i>Vanessa cardui</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
16	<i>Polygonia egea</i>				v	v	?	v			v	v	v	v	v	v	
17	<i>Melitaea telona</i>			v	v	v	v	v	v	v	v	v	v	v	v	v	v
18	<i>Melitaea didyma</i>												v	v	v	v	v
19	<i>Melitaea (trivia) syriaca</i>			v	v	v	v	v	v	v	v	v	v	v	v	v	v
20	<i>Melitaea collina</i>											v	v	v	v	v	
21	<i>Melitaea cinxia</i>													v			
22	<i>Melitaea deserticola</i>			v	v	v	v	v	v	v	v	v	v	v	v	v	v
23	<i>Melitaea acentria</i>													v			
24	<i>Issoria lathonia</i>													v	v	v	
25	<i>Coenonympha pamphilus</i>															v	
26	<i>Pseudochazara telephassa</i>				v	v	v	v	v	v	v	v	v	v	v	v	
27	<i>Chazara persephone</i>												v	v	v	v	
28	<i>Melanargia titea titea/titania</i>				v	v	v	v	v	v	v	v	v	v	v	v	
29	<i>Maniola telmessia</i>				v	v	v	v	v	v	v	v	v	v	v	v	v
Lycaenidae																	
30	<i>Aricia agestis</i>				v	v	v	v	v	v	v	v	v	v	v	v	v
31	<i>Plebejidea loewii</i>			v													
32	<i>Neolysandra amanda</i>													v	v		
33	<i>Aricia anteros</i>													v			
34	<i>Tarucus rosaceus</i>			v							?						
35	<i>Cyaniris semiargus antiochena</i>											v	v	v	v	v	
36	<i>Zizeeria karsandra</i>			v	v	v	v	v	v	v	v	v	v	v	v	v	v
37	<i>Pseudophilotes vicrama</i>				v	v	v	v	v	v	v	v	v	v	v	v	
38	<i>Freyeria trochilus</i>			v	v	v	v	v	v	v	v	v	v	v	v	v	v
39	<i>Celastrina argiolus</i>												v	v			
40	<i>Lampides boeticus</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
41	<i>Polyommatus icarus</i>			v	v	v	v	v	v	v	v	v	v	v	v	v	v
42	<i>Lycaena thersamon</i>	v		v	v	v	v	v	v	v	v	v	v	v	v	v	v
43	<i>Lycaena phlaeas</i>	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
44	<i>Epamera glaucus</i>			v													
45	<i>Plebejides nicholli nicholli</i> (<i>P. n. cleopatra</i> ?)													v			
46	<i>Kretenia eurypilus</i>													v			
47	<i>Erynnis marloyi</i>													v			
Hesperiidae																	
48	<i>Spialia orbifer</i>		v	v	v	v	v	v	v	v	v	v	v	v	v	v	
49	<i>Muschampia tessellum</i>					v								v	v	v	
50	<i>Pyrgus armoricanus</i>														?	?	
51	<i>Thymelicus sylvestris</i>				v	v	v	v	v	v	v	v	v	v	v	v	

Table B2b: Locality codes I–XVI of Octavius PICKARD-CAMBRIDGE March–May 1865 as used above in Table B2a.

Location	Date	Data
I	16. III. 1865	Arrive Jaffa
	17.–18. III. 1865	Ramleh [Ramla]
II	17.–18. III. 1865	El Birriyeh
	17.–18. III. 1865	Kuriet-el-Nab
	19. III. 1865	Jerusalem, Valley of Hinnom
	20. III. 1865	Jerusalem, Church of the Holy Sepulchre, Mt. Olivet
III	28. III. 1865	Left Jerusalem
	28. III. 1865	Bethany [al-Eizariya]
	30. III. 1865	Elisha's Well [Elisha's Spring – Ain-es-Sultan, near Jericho]
	1.–5. IV. 1865	Jericho [stay of 8 or 9 days]
	6. IV. 1865	Monastery of Mar-Saba
	6. IV. 1865	Pools of Solomon [3.5 km SW of Bethlehem]
	7. IV. 1865	Bethlehem
IV	8. IV. 1865	Near Hebron
	9.–12. IV. 1865	Hebron
	9.–12. IV. 1865	Bethlehem
	9.–12. IV. 1865	Jerusalem
	13. IV. 1865	Beeroth [Al-Bireh, 15 km N of Jerusalem]
VI	16. IV. 1865	Summit of Mt. Gerizim
	17. IV. 1865	Nablous [Nablus]
VII	17. IV. 1865	Jenin
	17. IV. 1865	Jezreel [Jezreel Valley]
	18. IV. 1865	Shunem

Location	Date	Data
VIII	18. IV. 1865	Nain [Nein]
	19. IV.–13. V. 1865	Nazareth
	19. IV.–13. V. 1865	across the Kishon River
	19. IV.–13. V. 1865	Mount Carmel
IX	19. IV.–13. V. 1865	Haifa
	19. IV.–13. V. 1865	Kefr Menda
X	19. IV.–13. V. 1865	Canan-el-Jelil (Cana of Galilee)
	19. IV.–13. V. 1865	Tiberias and the Sea of Galilee
XI	19. IV.–13. V. 1865	Tel Hûm
	19. IV.–13. V. 1865	Safed
XII	19. IV.–13. V. 1865	Kedes
	19. IV.–13. V. 1865	Hûnin
XIII	19. IV.–13. V. 1865	Banias
	19. IV.–13. V. 1865	Hasbeiya
	19. IV.–13. V. 1865	Rasheiya
XIV	19. IV.–13. V. 1865	skirts of Mount Hermon
	19. IV.–13. V. 1865	Damascus
	19. IV.–13. V. 1865	by the River Abana
	19. IV.–13. V. 1865	Abila
XV	19. IV.–13. V. 1865	Suk
	19. IV.–13. V. 1865	Wady Barada
	19. IV.–13. V. 1865	Surghaya
XVI	19. IV.–13. V. 1865	Baalbec
	14. V. 1865	Beyrout [Beirut]
	18. V. 1865	Beyrout [left at some time after 18. V. to sail for Alexandretta]

32 *Neolysandra amanda* (SCHNEIDER, 1792) (*Lycaena amanda*). 1897-507 – one male of this large species, confined to the N Golan Heights (Birket er Ram = Lake Phiala of Josephus) and both Lebanese mountain ranges above ca. 900 m, was likely collected between 16th May and 18th June 1864 (TRISTRAM 1882: 575 and chapters 24–26, Tab. B1a+b), or by OPC, locations XIII–XIV (Tab. B2a+b).

33 *Aricia anteros* (FREYER, 1838) (*Lycaena anteros*). 1897-520, 1897-521 – two males of this uniquely coloured species (males having metallic green scales on the upper surface of the wings) were probably collected in one of the Lebanese mountain ranges above about 1000 m between 28th May and 18th June 1864 (TRISTRAM 1882: chapters 25–26, Tab. B1a+b), or by OPC in the Mt. Hermon area during early May 1865, location XIII (Tab. B2a+b).

34 *Tarucus rosaceus* (AUSTAUT, 1885) (*Lycaena theophrastus* = *Tarucus theophrastus*). 1897-539, 1897-541 – two males of this predominantly Afrotropical *Tarucus* species exist in the collection. It flies along the rift valley, often amongst *Ziziphus spina-cristi* (L.) DESFONTAINES (Rhamnaceae), its dominant hostplant. The closely related eremic species *T. balkanicus* (but with a more north-western distribution) also occurs along the routes taken by HBT and OPC but was not collected. *T. rosaceus* flies along the rift valley from approximately –380 m below sea level around the Dead Sea to the upper Jordan valley at about 100 m above sea level. Flying almost year round, it could have been collected from mid-January to the end of May 1864 along the rift valley by HBT (TRISTRAM 1882: chapters 1–2, 16–26, Tab. B1a+b), or by OPC in the vicinity of Jericho between 30th March and 6th April 1865, location III, and possibly also in the area of the Sea of Galilee 19th April to 13th May 1865, location X (Tab. B2a+b).

35 *Cyaniris semiargus* (ROTTEMBURG, 1775) (*Lycaena semiargus* var. *antiochena*). 1897-529, 1897-530, 1897-531 – three males of this uncommon species were possibly collected between 8th May and 18th June 1864 above about 500 m altitude in N Israel or the

Lebanese mountain ranges (TRISTRAM 1882: chapters 24–26, Tab. B1a+b), or by OPC, locations XI–XV (Tab. B2a+b).

36 *Zizeeria karsandra* (MOORE, 1865) (*Lycaena galba* = *Lachides galba*). 1897-542 – one female of this widespread species was collected. It flies year-round at low altitude so could have been taken by HBT anywhere except the middle and high zones of the Lebanon and Anti-Lebanon ranges, or by OPC, locations III–XVI (Tab. B2a+b).

37 *Pseudophilotes vicrama* (MOORE, 1865) (*Scolitantides hylas* = *Pseudophilotes baton*). 1897-532, 1897-533, 1897-534 – one male and two females could have been collected in October 1863 or between the end of February to 18th June 1864 (TRISTRAM 1882: chapters 1–2 and 16–26, Tab. B1a+b), or by OPC, locations IV–XV (Tab. B2a+b).

38 *Freyeria trochylus* (FREYER, 1844) (*Chilades trochylus*). 1897-545, 1897-546, 1897-547, 1897-548, 1897-549, 1897-550 – six specimens of this small lycaenid were collected. Commonly encountered around its hostplant *Andrachne* spp., its flight period in the Levant is year-round (except mid-winter, December to January) and occurs at altitudes ranging from –380 m at the bottom of the rift valley up to about 1400 m. Therefore it could have been collected by HBT anywhere except at the top of the Lebanese ranges and at any time except mid-winter 1863–64, or by OPC, locations III–XVI (Tab. B2a+b).

39 *Celastrina argiolus* (LINNAEUS, 1758) (*Cyaniris argiolus*) – two specimens of this uncommon species were collected probably by HBT in the Lebanese mountains above ca. 1000 m (TRISTRAM 1882: chapters 24–26, Tab. B1a+b), or possibly by OPC, locations XII–XIII (Tab. B2a+b).

40 *Lampides boeticus* (LINNAEUS, 1767) (*Polyommatus baeticus*). 1897-508, 1897-509 – two males of this very common lycaenid could have been collected by HBT anywhere except C–H in Tab. B1 (TRISTRAM 1882: chapters 3–8, Tab. B1a+b) or possibly by OPC anywhere along his route.

41 *Polyommatus icarus* (ROTTEMBURG, 1775) 1897-522, 1897-523 — one male and one female of this common lyceanid were likely collected on the Lebanese coast (when HBT traveled south to Palestine) from September to early November 1863 or from early spring in mid-February to the Lebanese mountains on 18th June 1864 (TRISTRAM 1882: chapters 1, 2, 16–26, Tab. B1a+b). Alternatively, OPC could have encountered this species at locations III–XVI (Tab. B2a+b). It does not appear in AWPC's list.

42 *Lycaena thersamon* (ESPER, 1784) (*Chrysophanus thersamon*). 1897-502, 1897-503 — one male and one female of this, the commonest Levant copper. The flight period of this species is from mid-February to mid-November and the HBT expedition coincided with this from September to mid November 1863 and from mid February 1864 to July 1864, so were very likely taken at this time (TRISTRAM 1882: chapters 1, 2, 9–26, Tab. B1a+b), or by OPC, locations I, III–XVI (Tab. B2a+b).

43 *Lycaena phlaeas* (LINNAEUS, [1760]) (*Chrysophanus phlaeas*). 1897-500, 1897-501 — two males of this widespread but uncommon copper could have been encountered any time between September to mid November 1863 and from mid February 1864 to July 1864 at a wide range of altitude (–360 m to 2000 m) (TRISTRAM 1882: chapters 1, 2, 9–26, Tab. B1a+b), or by OPC, locations I–XVI (Tab. B2a+b).

44 *Epamera glaucus* BUTLER, [1886] (*Epamera jordanus*). 1897-511 — one male of this predominantly Afrotropical genus. This species flies only in the rift valley as north as Jericho and so was very likely collected between 21st March and 25th April 1864 in the Dead Sea valley by HBT (TRISTRAM 1882: chapter 21, Tab. B1a+b), or by OPC at Jericho between 30th March and 6th April 1865, location III (Tab. B2a+b).

45 *Plebejides nicholli* (ELWES, 1901). 1897-512, 1897-525, 1897-526, 1897-527 — three males and one female of this species from the Lebanese upper mountain ranges. They were very likely collected either above 1450 m between 3rd and 4th of June 1864 when the HBT expedition climbed Mt. Hermon or also by HBT in the Lebanese Cedar Mountains (TRISTRAM 1882: chapter 26, Tab. B1a+b). It is unlikely OPC collected these specimens as his route was confined to the lower skirts of Mt. Hermon (PICKARD-CAMBRIDGE 1872, A. W. PICKARD-CAMBRIDGE 1918).

46 *Kretania euryphilus* (FREYER, 1851). 1897-528 — this single female was probably collected between 28th May and 18th June 1864 in the upper heights of the Lebanese mountain ranges above 1200 m (TRISTRAM 1882: chapters 25–26, Tab. B1a+b).

Hesperiidae

(8 specimens not located) — See Col.-Pl. 4, Figs. 52–55.

47 *Erynnis marloyi* (BOISDUVAL, 1834) (*Thanaos peleas* = *Erynnis pelias*?). 1897-596 — one female of this uncommon, single-brooded mountain species was probably collected in the Cedar, Hermon or Anti-Lebanon mountains between 28th May and 18th June 1864 (TRISTRAM 1882: chapters 25–26, Tab. B1a+b), or by OPC on Mt. Hermon during late April/early May 1865, location XIII (Tab. B2a+b).

48 *Spialia orbifer* (HÜBNER, [1823]) (*Hesperia orbifer*). 1897-583, 1897-584, 1897-585, 1897-590, 1897-591 — five specimens of this common multi-brooded species could have been collected by HBT in October 1863 or during March–June 1864 in the Mediterranean zones, but not in the lower Jordan and Dead Sea Valleys (TRISTRAM 1882: chapters 1, 2 and 18–26, Tab. B1a+b), or by OPC, locations II–XV (Tab. B2a+b).

49 *Muschampia tessellum* (HÜBNER, [1803]) (*Hesperia tessellinus*) — two specimens of this large hesperid are recorded in AWPC's manuscript list (A. W. PICKARD-CAMBRIDGE [undated]). It occurs on high ground above about 500 m in C to N Israel, N Jordan or the Lebanese mountains and may have been collected by HBT between early April and 18th June 1864 (TRISTRAM 1882: chapters 21–26, Tab. B1a+b), or by OPC, locations V, XIII–XV (Tab. B2a+b). These specimens could not be located in the collection.

50 *Pyrgus serratulae* (RAMBUR, 1839)/*Pyrgus armoricanus* (OBERTHÜR, 1910) (*Hesperia alveus* = *Pyrgus alveus*). 1897-586, 1897-587, 1897-588 — five specimens (of which two could not be located by the authors) were possibly collected at the upper heights (above 1600 m) of the Cedar and Anti-Lebanon Mountains between 28th May and 18th June 1864 (TRISTRAM 1882: chapters 25–26, Tab. B1a+b), or less likely by OPC, locations XVI?–XV? (Tab. B2a+b). Dissection of the genitalia is required to confirm the exact identity of these specimens.

51 *Thymelicus silvestris* (PODA, 1761). 1897-597 — a worn male of this seasonal and widespread orange hesperid, possibly at the end of its flight period, was collected between February in the Judean Desert or Dead Sea Valley below sea level to early June in the Lebanese mountains (TRISTRAM 1882: Chapters 16–26, Tab. B1a+b) or by OPC, locations IV–XV (Tab. B2a+b). It does not appear in AWPC's list.

Conclusions

The final list of 51 butterfly species collected by the TRISTRAM and PICKARD-CAMBRIDGE expeditions represents only 30% of the 170 species occurring in Israel (Palestine), East Jordan and Lebanon (LARSEN 1974, LARSEN & NAKAMURA, 1983, BENYAMINI 2002, BENYAMINI & JOHN 2020, BENYAMINI 2020–2022 [in prep.]), where *Colias erate* does not count and *Muschampia hieromax levantius* and *M. h. stepporum* are listed as two species. The remaining 119 species that were not collected, but were flying during their combined 11–12 month expeditions include several very common species.

It suggests that butterfly collecting was a low priority and perhaps most of the specimens were taken over a few favorable dates when butterflies would have been abundant during the spring peak bloom period, for example on the plain of Gennesaret/Ginosar on the west coast of the lake of Galilee between 26th February and 8th March 1864 (TRISTRAM 1882: 407, 422). Some widespread but missing species include: Pieridae: *Pontia glauconome*, *Colotis fausta*, *C. phisadia*, *Elphinstonia charlonia*, *Zegris eupheme*. Nymphalidae: *Vanessa atalanta*; Satyrinae: *Ypthima asterope*, *Hipparchia fatua*, *H. pisidice*, *Hyponephele lupinus*, *Pararge aegeria*, *Lasiommata megera*, *L. maera*. Lycaenidae: *Satyrrium spini*, *S. ilicis*, *Cigarithis/Apharitis acamas*, *Leptotes pirithous*, *Azanus jesous*, *Lachides (Chilades) galba*, *Plebejides (Plebejus) nicholli*. Hesperiidae: *Carcharodus alceae*, *C. stauderi*, *Pyrgus melotis*, *Thymelicus acteon*, *T. hyrax*, *Gegenes pumilio*, *G. nos-trodamus*.

Estimated collecting dates and places

By reconstructing the routes of the HBT and OPC expeditions and combining current knowledge we can arrive at an estimate of the missing collecting data. Inevitably for the more common and widespread species (particularly *Colias croceus*, *Pontia daplidice*, *Polyommatus icarus* and *Lycaena thersamon*) these estimates cannot be accurate, but for species with limited distribution or flight period our estimates become more precise. Examples of these include *Danaus chrysippus*, *Coenonympha pamphilus*, *Epamera glaucus*, *Plebejides nicholli* and *Kretania euryphilus*.

Uniquely, for one species an accurate estimate of the date and locality of collection can be made over 150 years after the event. The recently described *Melitaea acentria* LUKHTANOV, 2017 is an endemic species of upper Mount Hermon. The collecting dates can be traced back exactly to either the 3rd or 4th of June 1864 when the TRISTRAM expedition climbed the mountain from the Syrian village of Rachaya/Racheiya (TRISTRAM 1882: 595–604).

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