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ENTOMOLOGICAL SURVEYS BY THE TORREVILLAS FAMILY
FOR THE BISHOP MUSEUM IN THE PHILIPPINES, 1960–1967

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Cover photo: A Torrevillas family field survey party on Luzon in the mid-1960s (photo courtesy Bishop Museum Entomology Correspondence files).

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Entomological Surveys by the Torrevillas family for the Bishop Museum in the Philippines, 1960–1967¹

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From January 1960 to September 1967 the Bishop Museum contracted with Hermaneli M. Torrevillas (1937–2019), known as Nell, to undertake insect collecting in various parts of the Philippines. There is a thick folder in the Bishop Museum's entomology correspondence files documenting museum support of these efforts, and much of the information below is taken from this. Nell and his relatives were from Gingoog City, in Misamis Oriental Province of northern Mindanao, and the collecting effort was a family affair, with brother Lemuel and various cousins making up the field crews. Nell was studying to earn a medical degree at Silliman University in Dumaguete City, on Negros Island, but had summers off from April to August, so most of the collecting was done during a 60-day window within this period each year, generally in April and May, since the rainy season usually started in June.

While working during his undergraduate years at the Silliman Natural History Museum in Dumaguete City, Nell had made the acquaintance of Bishop Museum entomologist Lawrence Quate, who collected throughout the Philippines from September 1959 through January 1960. A week after Quate's departure, Nell wrote to him in Honolulu asking if the museum would be interested in supporting additional collecting efforts in the Philippines during Nell's summer breaks. The museum agreed to this, and from 1960 onward for the next seven years Nell would write to Quate each January proposing a new survey area for the coming year, and the museum would provide a modest amount of funds (about \$500 per year; or ca. \$5,500 in 2025 dollars) to support the effort, with the resulting specimens reaching the museum around September. Then the process would start over after the year-end holiday period, with Nell sending a new proposal for the next summer's activities.

Although the labels in the Bishop Museum collections simply list H. M. Torrevillas as the collector of the specimens they received, there were certain years where he was not even involved in the field trips. These included 1965, when he was undertaking an internship for his medical degree, and sent the family to the Wawa Dam area of central Luzon, and 1967, when he had accepted his first full time position running a clinic at Mayoyao in the mountains of northern Luzon, and sent the family to several localities in that general vicinity. The details of his life and movements can to some extent be extracted from a book he wrote later in life, *A Mystical Connection* (Torrevillas 2011) in which he engages in various metaphysical discussions while also weaving in experiences from his earlier years. From this book, plus correspondence in the Bishop Museum files, published works using the specimens, and labels on museum specimens, it has been possible to gain an understanding of the localities where the Torrevillas team collected during the years they were funded by the Bishop Museum:

1. Contribution no. 2025-007 to the Pacific Biological Survey.

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- 1960 Mindanao (Misamis Oriental Prov. – Balasan; Mt. Kibungol, 800 m.; Mt. Balatukan 1,000–2,000 m).
- 1961 Mindanao (Misamis Oriental Prov. – Minalwang; Minabanan; Mt. Empagatao; Pigtibiran).
- 1962 Luzon (Camarines Sur Prov. – Mt. Iriga, 500–600 m; Mt. Mayon).
- 1963 Luzon (Camarines Sur Prov. – Bicol Peninsula, Mt. Isarog, 750–850 m); Mindanao (Misamis Oriental – Mt. Pomalathi, 800–1,000 m).
- 1964 Luzon (Mountain Prov. – Abatan, 1,800–2,000 m).
- 1965 Luzon (Rizal Prov. – Mt. Montalban, Wawa Dam area, 150–200 m; Albay Prov. – Libon 200 m; Camarines Sur Prov. – Mt. Isarog, 600–800 m).
- 1966 Luzon (Ifugao Prov. – Mayoyao, 1,300–1,500 m.).
- 1967 Luzon (Ifugao Prov. – Jacmal Bunhian, 800–1,000 m.; Liwo, 1,000–1,300 m.); Mindanao (Misamis Oriental – Hindangon, 600–700 m).
-

The Torrevillas letters do not contain detailed accounts of the first two years of work on Mindanao, and his book also seems to comingle accounts of these trips to some extent. It can be determined that in 1960 the group went to a range of mountains 40 km west of Gingoog, which extended into Bukidnon Province, an area where the forest was still intact at that time. The group hired a jeep and followed an old logging road for some 20 miles inland (because the Philippines had been under American administration, Nell's letters often used English units of measurement), then walked another four hours before setting up a camp at a secluded spot in a gorge, with a small waterfall to the west. Here they made friends with the local hill tribes and had them cut down flowering trees so they could collect the beetles and other insects inhabiting the canopy, paying with bottles of gin, or tins of sardines. The tree cutting was illegal but since it was happening anyway, the group simply took advantage of the situation.

Neither the book nor the letters contain many details regarding the subsequent 1961 trip to northern Mindanao. It appears that the team collected at three sites, each progressively higher and further inland, returning to their relatives' houses in Gingoog City in between forays to replenish supplies and ship off specimens already collected. The names used on their labels for the mountains in these areas appear to have been phonetic approximations, and cannot be found on any readily available maps dating from the present back to the World War II era.

In 1962 the group shifted its operations to the Bicol Peninsula of southern Luzon, taking a train from Manila to Iriga. This was the hometown of Nell's cousin Ingo. The team consisted of Nell, his two brothers, and two cousins, Ingo and Tony Balang. They started out by working on Mt. Iriga in Camarines Sur, then moved over to Mt. Mayon, in Albay Province. Their camp on the latter mountain lay at 2,500 feet elevation, slightly over a mile away from the lookout area that could be reached by road. The forest in this area was 10–12 feet tall, so dense that it could only be entered using existing small trails, and was cut by deep ravines bounded by cliffs and gorges. The group collected specimens around the base of the mountain for several weeks, then put in a sub-camp at 4,000 feet elevation, which was at the upper edge of the forest. The cone was bare from that point to

the summit, with a surface of fine brown sand. Nell and his cousin Tony made collections in this relatively bare upper zone of the mountain on a day when they tried unsuccessfully to reach the summit.

In 1963 the team was again in the Bicol Peninsula, with a camp on Mt. Isarog in Camarines Sur Province. A road led up to a VHF station at 4,000 feet, and their camp was at 3,000 feet, near a little river. This river subsequently flooded and destroyed much of the camp but Torrevillas was able to secure his specimens before the flooding, an incident dramatically recounted in *A Mystical Connection*. One species of Diptera in these collections that survived the flood was later named *inundans*, reflecting that incident (Evenhuis 2016). While the group was in the field, Nell's father became terminally ill from cancer. Brother Lemuel was left in charge of the camp, while Nell returned to Mindanao for the funeral (Fig. 2).

In 1964 the Torrevillas team shifted its focus to the mountains of northern Luzon, from which the majority of their later collections would originate, initially working in the area around Abatan, in Municipio Buguias of Benguet Province, about 60 miles north of Baguio. The group took buses from Manila to Baguio, then hired a truck to take them along a ridgetop road through Sinipsis, lying at 6,000 feet elevation, and then onward to Abadan, a village consisting of about 30 houses sitting at a crossroads where mining roads took off to Mankayan and Buguias. Here they rented a small wooden house as a base of operations. The group eventually moved to another camp in the Lo-o Valley, a few kilometers away at lower altitude, because it was uncomfortably cold up at Abadan, spending 8 weeks in this latter area.

In 1965 collections were made at Montalban and Wawa Dam in central Luzon. As noted earlier, Nell did not participate in this field trip, because he was involved in a medical internship. The group was instead led by his cousin Ingo. The Montalban area was chosen because it was easy to get to and saved money, although there was not much rain forest there. Even so, Quate seemed satisfied with the collections obtained.

The 1966 trip concentrated in the area around Mayoyao in Ifugao Province of northern Luzon, where Nell was in the process of taking charge of a medical clinic. Mayoyao was reached by driving onward past their previous survey site at Abadan, then through Bontoc and Banaue to where the provincial road ended, about 35 miles east of the latter town. The Torrevillas team established a base camp here next to the hospital grounds.

By 1967, Nell had earned his medical degree and was an M.D. running what had become the Mayoyao Community Hospital. A final collecting trip occurred in this year, but there is no mention of it in Nell's book or the letters. Quate, the primary contact for the Torrevillas family at the Bishop Museum, had resigned his position in the summer of 1966 and moved to California, so Nell and his family were now dealing directly with J. Linsley Gressitt, the head of the Entomology museum's department at the time. Nell wrote to him in early 1967 and suggested that his brother Lemuel might be able to take over the annual collecting duties, with Agusan Province of Mindanao proposed as the target area. Gressitt indicated that the museum had sufficient specimens from northern Mindanao, so Nell suggested an alternative area around Bunhian, in northern Luzon near his new medical posting, with which Gressitt concurred. The proposed survey area was noted as being 30 km north of Mayoyao, and reachable only on foot, in a place where good mixed forest remained. This 1967 trip generated a large number of specimens, particularly from Jacmal Bunhian. In addition to terrestrial insects, the material collected in this year contained long series of specimens from aquatic groups, such as Odonata and Gerromorpha, indicating that the collecting parties were moving along stream corridors.



Fig. 1. A Torrevillas family survey party somewhere in northern Luzon, ca. 1963 (photo courtesy Bishop Museum, Entomology correspondence files).

This round of field work in northern Luzon during the spring of 1967, under the leadership of Lemuel, did not produce the same quality of specimens as had been previously supplied by Nell. In particular, Gressitt felt that smaller-sized flies and wasps had been overlooked, and that much of the material had been taken from light traps and was not in particularly good condition. Based on this, the Bishop Museum politely ended the association by explaining, truthfully, that their grant funding had declined due to budget constraints imposed by the Vietnam War, and that they no longer had funds to continue supporting collecting efforts in the Philippines. Their correspondence with the Torrevillas family ceased after 28 September 1967.

The letters in the museum's correspondence file also contain some additional interesting anecdotes about collecting conditions, particularly on Luzon. The Bicol Peninsula in particular seems to have presented challenging conditions.

Nell to Quate, Bishop Museum, from Quezon City, 4 January 1963:

"Until now I cannot forget the poor collections we have made last summer in the Bicol region. I really feel a bit ashamed of that work in as much as our previous field collections in Mindanao were quantitatively better. I hope though the quality was all right.

I admit that such collections were poor; but I would believe that any field party with amateur members like ours would probably have done the same showing. The first factor that hindered us in that area was the unpredictable tropical rains which I know that you have experienced in the different islands in the Pacific. It was in the last few weeks of our work



Fig. 2. The Torrevillas family gathered for the funeral of their patriarch, who passed away on 15 May 1963. This photo was sent to the Entomology Department at the Bishop Museum with the simple note on the back reading “Our family,” and is the only verified photo of them in the Bishop Museum files. Nell, the oldest brother, is presumably at the left with his wife and three children, while his mother is in the center, while a younger brother is at the right. Another one of Nell’s brothers, Lemuel, remained in charge of the field camp on Mt. Isarog, and was not present at this funeral (photo courtesy Bishop Museum, Department of Entomology correspondence files).

on Mt. Mayon when the sun would just peep for an hour or two and the rains would just pour the whole day long. With this opportunity we would dash to the outside and collect what we could. The second factor was the very thick forest floor on both Mt. Iriga and Mt. Mayon. It was almost impenetrable. We had to work along river banks, clearings, trails, and tried to cut down trees. But despite all of this the least I can say is that we did try all our best.”

Health considerations also sometimes factored in. Nell to Quate, Bishop Museum, 21 April 1963, from Iriga:

“My plan is to spend the rest of our collecting time right here in Mt. Isarog rather than go to another collecting site in Sorsogon. I believe a complete stay of two months in this mountain area will enable us to (at least) get most of the insect fauna. Aside from this we fear snail fever (Schistosomiasis) and Filiariasis (elephantiasis) which have been reported so rampant in Sorsogon.”

In northern Luzon the problems seem to have been more social than meteorological. Nell to Setsuko Nakata, Administrative Assistant, Department of Entomology, Bishop Museum, from Abatan, Mountain Province, Luzon, 6 May 1964:

"Before we came to this place a lot of people have scared us that the natives in this province cut off the heads of strangers and foreigners or those outside their tribe. This is not true anymore. The last of their rituals was some 14 years ago when two American anthropologists were beheaded and the place is just 10 km. away from our camp. But we don't worry anymore because most of them have received education and they know the laws of the land. There are different missions here too."

Overall, the Torre Villas's collecting in the Philippines was concentrated in three areas: northern Mindanao, the Bicol Peninsula of southern Luzon, and the mountains of northern Luzon. Despite having gone to school and worked at a museum on Negros, and undertaking some early collecting there, it does not appear that Nell or any of the Torre Villas group made collections on any of the many islands in the Visayas during the period when they were funded by the Bishop Museum. Although a foray to Palawan was also discussed in their letters, it there is no evidence they ever went there either (although there are collection labels indicating that Nell had made some earlier collections on Palawan in 1959), with this island instead being covered by another museum-sponsored group led by Dr. Dioscoro S. Rabor. Nell had previously worked for Dr. Rabor at the Silliman Museum in Dumaguete, and there seems to have been a certain amount of competition between the Torre Villas crew and Dr. Rabor's, with Bishop Museum providing funding to both. Based on correspondence, it seems that Quate took care to make sure that the two groups operated in different parts of the Philippines, well away from each other.

Although they do not represent a geographically comprehensive sample of the Philippine biota, the specimens collected by the Torre Villas family form an important part of the Philippine entomological holdings in the Bishop Museum, where they are still accessible to the world scientific community. Many were collected from areas that have now been subject to significant ecological disturbance from logging and agriculture, and can no longer be duplicated. Their value can be judged by the large number of type specimens for new species across many insect orders that are based on this material (see Appendix). As such, they continue to provide an important resource for current and future research, and represent the enduring legacy of a small but interesting episode in the entomological history of the Pacific.

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APPENDIX

Some examples of Philippine entomological specimens collected by H. M. Torrevillas and family that resulted in type designations in peer-reviewed publications

Diptera

ASILIDAE: See Oldroyd (1972) for collecting localities of H. M. Torrevillas and others, with 20 new species and holotype designations.

BOMBYLIIDAE: See Evenhuis & Arakaki (1980) for holotype of *Geron philippinensis*, and paratypes of *Petrorossia williamsi* and *Villa lepidopyga*.

CELYPHIDAE: See Tenorio (1969 and 1976) for holotypes and paratypes of *Acelyphus lateralis*, *Idiocelyphus reniformis*, and *Spaniocelyphus viridescens*; paratypes of *Idiocelyphus parviceps*, and *Idiocelyphus steyskali*.

CALLIPHORIDAE: See Kurahashi & Magpayo (2000) for paratypes of *Bengalia kanoi* and *Stomorhina neali*, and Lehrer (2005) for holotypes of *Ashokiana ramsdalei* and *Laoziana camerina* (= *Bengalia*), in the subfamily Bengalinae.

STRATIOMYIDAE: See Evenhuis (1979) for types of *Evaza* species.

STRONGYLOPHTHALMYIIDAE: See Evenhuis (2016) for holotype of *Strongylophthalmyia inundans*.

SYRPHIDAE: See Steenis *et al.* (2008) for holotypes and paratypes of *Sphegina* species.

TABANIDAE: See Stone & Philip (1974) for holotype and paratypes of *Haematopota torrevillasi*.

Dermoptera:

See Srivastava (1976) for holotypes and paratypes of species in the following families and genera:

ANISOLABIDIDAE: *Epilandex*.

CHELISOCHIDAE: *Prореus*, *Adiathella*.

DIPLATYIDAE: *Diplatys*.

FORFICULIDAE: *Kosmetor* (= *Pterygida*) and *Timomenus*.

LABIDURIDAE: *Allostethus*.

SPONGIPHORIDAE: *Chaetospania*, *Auchenomus*,

Heteroptera:

GERRIDAE: See Zettel (1994, 1999) for holotypes and paratypes of species in the genus *Potamometropsis*.

Homoptera:

DERBIDAE: See Zelazny (1981) for holotypes and paratypes of species in the genera *Alara*, *Sumangala*, *Saccharodite*, *Rhotana* and *Levu*.

Hymenoptera:

ICHNEUMONIDAE: See Momoi (1971) for holotypes and paratypes of the species in the genera *Leptopimpla*, *Itopectis*, *Coccygomimus* and *Syzeuctus*.

Plecoptera:

LEUCTRIDAE: See Kawai (1969) for holotype of *Rhopalopssole femina*.