

The *pollu* beetle in the Andaman Islands – concealing errors

‘And Ye Shall Know the Truth and the Truth Shall Make You Free.’

John 8: 32

‘One should search for errors, analyze them when found, and learn from them; it is an unforgivable sin to conceal errors.’

Mayr (1997: 43)¹

The lead taken by *Current Science* in addressing research misconduct and sloppiness in India is laudable². A team of agricultural entomologists and plant pathologists from the Uttar Banga Krishi Viswavidyalaya, Puntibari, Cooch Behar, West Bengal (UBKV) conducted field surveys in September–October 2016 in both West Bengal and the Andaman & Nicobar (A&N) Islands and the findings were submitted as a report³ and also presented in a symposium held on 22 and 23 December 2016 (ref. 4). They reported *pollu* beetle not only in the A&N Islands but also in West Bengal. Report of the *pollu* beetle (known to occur only in south India) in West Bengal and A&N Islands has serious implications on pepper cultivation and production in India. I visited UBKV on 13 January 2017 to examine the specimens of *pollu* beetle collected in the A&N Islands and West Bengal. However, all the five authors were reluctant to discuss their findings and denied access to the collected specimens. They explicitly stated that the specimens were not authentically identified by a specialist and that larvae were not observed inside the berries (*pollu* beetle completes its larval stage inside the berry). The methodology given in the abstract also states that questionnaires and discussions were held with agricultural extension agencies, Director of ICAR-CIARI, farmers, etc. in addition to recording incidence and severity of the pests from different locations but makes no mention of confirming their identities. I surveyed and closely observed 503 vines in Puntibari and two (Mohitnagar and Maynaguri) of the three locations where they had observed the *pollu* beetle to the extent of 3–4%, but I found no beetles or symptoms of infestation on berries or leaves. As a taxonomist studying flea beetles for more than 16 years, I have been collecting these beetles from different parts of the country including Assam, Arunachal Pradesh, Manipur,

Meghalaya, West Bengal and A&N Islands but have never collected the *pollu* beetle, *Lanka ramakrishnai* (a species of flea beetle) from any other place other than from south India. The survey report³ submitted by the UBKV team, which I could access, also contains photographs of what they purport to be the *pollu* beetle (Figure 1) and it has no resemblance to the *pollu* beetle photograph (Figure 2) provided on the website⁵ of ICAR-National Bureau of Agricultural Insect Resources, Bengaluru, a well recognized repository of agriculturally important insects in the country.

It is indeed baffling that in these blatantly sloppy approaches the simple and sure way of confirming the identity of the species has been completely ignored by all the concerned scientists and more lies are being promoted to establish the ‘truth’. It is even more intriguing, while it was professed⁶ that beetle experts and entomologists need to undertake a systematic study on both spatial and temporal aspects and monitor its field incidence throughout the year to establish the occurrence of *pollu* beetle that causes



Figure 1. Photograph purported to be that of *pollu* beetle from the UBKV team survey report³.



Figure 2. Photograph of *pollu* beetle, *Lanka ramakrishnai* from the ICAR-NBAIR website.

12.89–18.56% berry damage⁷, this limited and short survey of just three days³ has proved its presence. The sloppiness amounting to gross research misconduct is further accentuated by the denial of access to the specimens and research data, reflecting unethical practices and bad scientific conduct. An enquiry committee instituted by ICAR more than a year ago to go into this issue is yet to submit the report⁸. The methodologies adopted to promote and support this issue give rise to the strong possibility of deliberate introduction of the *pollu* beetle into the A&N Islands and needs to be thwarted.

Denying examination of material or research data does not reflect good scientific conduct and in fact invites suspicions of sloppiness or plain misconduct. The Central Information Commission (CIC) in a landmark verdict of far reaching consequences ruled that no data arising out of public funded research can be exempted from disclosure⁹. The CIC verdict underscores the need for ensuring data transparency and the ICAR, administrative body of the largest agricultural research network in the world, should respond appropriately to this confidence crisis in conduct of research under its umbrella. The guidelines proposed by Ranade and Kumar¹⁰ in dealing with the scourge of research misconduct in India could very well be followed to inculcate a sense of responsibility and bring an end to unethical practices among researchers in the country.

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3. Laskar, N., Reza, M. W., Debnath, A., Khalko, S. and Sarkar, P., Report on Survey of insect-pest and disease incidence in black pepper in West Bengal and Andaman & Nicobar Islands, Uttar Banga Krishi Viswavidyalaya, Cooch Behar, West Bengal. 2016, p. 10.
4. Khalko, S., Sarkar, P., Laskar, N., Reza, M. W. and Debnath, A., Proceeding of the National Symposium on Impact of Climate Change, Biodiversity and Good Plant Protection Practices on Crop Productivity, Bidhan Chandra Krishi-Viswavidyalaya, Kalyani (Abstract No. TS-1/OP-01), 22–23 December 2016;

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5. <http://www.nbair.res.in/insectpests/images/Lanka-ramakrishnai2.jpg>
6. Birah, A., Bhagat, S., Tripathi, A. K. and Srivastava, R. C., *Indian J. Entomol.*, 2015, **77**(3), 302.
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8. F No. HS-35-9/2016-IA-V dated 3 January 2017 from Under Secretary and CPIO (Horticultural Science Division), Indian Council of Agricultural Research, New Delhi; <https://drive.google.com/file/d/0B3VKgRJHupTnS1QxMzYtOThkdIU/view?usp=sharing>
9. The Central Information Commission, New Delhi, File No. CIC/SH/C/2015/900318 dated 24th October 2016; doi: 10.13140/RG.2.2.13909.42729
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Samuel Cnoll in Tranquebar and establishment of the first ‘pharmacy’ – Laboratorium Chymicum – in India in 1732

One early, Europe-trained medical doctor to work in Tranquebar (Tarangampādi, 11°1’N, 79°50’E) near Tanjāvur, Southern India, was Samuel Benjamin Cnoll (1705–1767). Some articles refer to him as Knoll. He was trained in medicine in Halle, Germany, and recruited to work at the Royal Danish Mission, Tranquebar, from 1732 (ref. 1). Cnoll worked in Tranquebar until his death. Jensen¹ indicates that Cnoll supervised the Royal Danish Mission Hospital, Tranquebar from the 1740s and published a short article on the preparation of borax in *Acta Medica Hafniensis* in 1753 (ref. 2) (note 1). After his death in 1767, the herbal garden he had created in Tranquebar was bequeathed to his successors, who were doctors at the Tranquebar Mission¹, one of who was Johann Gerhard König³ (1728–1785), a surgeon, who had studied botany under the famous Carl Linnaeus in Sweden.

In Tranquebar, Cnoll established Laboratorium Chymicum, where he compounded and dispensed medications using locally available raw materials, but following the then popular Danish Pharmacopeia *Dispensatorium Hafniense* by Thomas Bartholin (note 2). Possibly Cnoll’s Laboratorium included the herbal garden, wherein he could grow local plants of medicinal value. In high likelihood, it is this garden which Jensen¹ refers as the ‘botanical garden (or plantation)’. Gottlieb August Francke⁴ remarks that the medications compounded and dispensed by Cnoll were effective in curing illnesses of the sick in Tranquebar. Differing from his predecessors, viz. Bartholomäus Ziegenbalg (1682–1719),

Heinrich Plütschau (1676–1752) and Johann Gründler (1677–1720), Cnoll rejected local medical knowledge⁵. However, Cnoll’s Laboratorium Chymicum, although was small, impresses as the earliest, formally set up laboratory, which could also be seen as the earliest western-medicine based pharmacy in the whole of India.

We need to recognize here that in ancient and medieval India, due to its enormous variety in terms of people, beliefs, languages and cultures, medical systems such as Ayurveda, Siddha, and because of the Arab–Persian influence Unani–Tibb flourished. These systems continue to be supported by many – estimated at 70% of rural Indian population⁶. The practitioners of these medical systems (*vaidyan-s*) of those days may have run small-level dispensaries – equivalent of modern pharmacies. In the present-day Chennai *marundu-kadai-s* (small stores that sell dry and wet medicinal herb materials) exist, which do not compound medicines as the *vaidyan-s* may have done.

The arrival of Cnoll and the establishment of Laboratorium Chymicum flag a pioneering connection between Tranquebar Halle Mission and scientific inquiry. This moment unpacks the plethora of complex connections between medicine, science, religion, and economy in Southern India in the early decades of the 18th century⁷. With the arrival of Cnoll, the Tranquebar Halle Mission metamorphosed into a fountainhead dispersing and circulating new knowledge, especially new science, says Jensen⁷.

I could track no further details of either Cnoll or his Laboratorium in Tran-

quebar, except that Johann Anton Niemeyer⁸ refers to him in page 773. The website of Franckesche Stiftungen (= The Francke Foundation), Halle, includes a letter (*ein Brief*) from Cnoll to Francke⁹.

Laboratorium Chymicum (= pharmacy) as a global concept was not something novel. Many European nations included several of them in the late 17th and early 18th centuries¹⁰. Obviously Cnoll was inspired by that idea that prevailed in Europe of his times. But in India, Cnoll’s Laboratorium was the first of its kind, which heralded a new concept of pharmaceutical dispensaries.

Francke’s *der Königlischen Dänischen Missionarien aus Öst-Indien eingesandte Ausführlichen Berichten*⁴ includes a communication by Cnoll to Friedrich Christian Juncker in Halle (pages 1071–1075). Juncker taught medicine at the University of Halle and Cnoll studied medicine with Juncker at Halle.

I can read and write German. But reading Francke⁴ and Niemeyer⁷ was difficult because the text is presented in Gothic fonts (Blackletter, Textura). However, I have provided relevant bibliographic information in this note for those interested in following these trails.

Notes

1. *Acta Medica Hafniensis* was a medical journal published by the Collegium Medicum Hafniense, Copenhagen^{11,12}.
2. Thomas Bartholin (1616–1680) was a well-known name in the 17th century European medicine. Names of 10 physicians