



Figure 1. *a*, *Gymnocladus assamicus* naturally growing in Arunachal Pradesh (India); *b*, *Gleditsia triacanthos* plantation along roadside in Montreal (Canada).

November) and is distinctly visible from far distance (Figure 1 *a*). Trees with such attractive appearance are planted as ornamental tree along streets, parks and botanical gardens. *Gleditsia triacanthos*, a sister genus of *Gymnocladus*, is widely planted as street tree throughout North America for its colourful leaves during autumn and physiognomy (Figure 1 *b*). *G. triacanthos* is an Eastern Asian descendent which migrated to North America across the Bering land bridge⁹ and is a popular tree throughout the region.

G. assamicus is a 15–20 m tall tree with moderate spread and upright silhouette. Light green young leaves provide filtered shade and turn bright yellow at the later stage. Though purple coloured flowers are not blazing, mature pods are used as soap substitute in rural areas of Arunachal Pradesh and adjoining areas in Northeast India. Local people also mentioned that mature pods are highly

favoured by deer and wild boar. Therefore, increase in *G. assamicus* population along the homegardens, agricultural land, pastures and roadsides in mountainous terrains of the region will be helpful in survival and growth of diminishing wildlife in the region.

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Tracing the photographic plate of Comet Bappu–Bok–Newkirk

This letter is with reference to the Historical Notes ‘Comet Bappu–Bok–Newkirk – the only comet with an Indian’s name to it’ by Kapoor¹. I wish to share with the readers, the story of how the comet’s photographic plate given in the article was traced.

I am an amateur astronomer from Bangalore and have been fascinated with comets as long as I can remember. I am equally intrigued on historical aspects of comets and I do not remember exactly when, but the first seeds of excitement about Vainu Bappu finding a comet back in 1949, was implanted in me early on.

At that time, the existence of the photographic plate on which his discovery was recorded was virtually unknown to our community and I had very much wanted the photograph for inclusion on research that I had begun on Vainu Bappu’s comet C/1949 N1 (Bappu–Bok–Newkirk). Years passed with no profound insight on the missing link.

In 2012, I had started study on a larger piece of comet-related work. It was during this phase, that I contacted several amateur astronomers globally. By good fortune one among them happened to be a professional astronomer, a veteran,

William Liller, who is a retired Harvard professor. I asked him a few questions about comets, and considering that he too is from Harvard, whether he could guide me to the right source in my quest for Vainu Bappu’s comet plate. I received a reply from Liller which was startling, as it revealed, he was a good friend of Vainu Bappu. In his e-mail, although 60 years had passed by, he was very fresh with nostalgia about his friendship with Bappu during the student days. To my question on the possible existence of the photographic plate of the Comet Bappu–Bok–Newkirk, he mentioned there are

CORRESPONDENCE

chances that it could still be in Harvard's Plate Stacks (where their humongous plate collection is stacked) as he had last seen it with Bappu, several years after the discovery of the comet. This was a positive lead and he asked me to approach Josh Grindlay, in-charge of the project and Alison Doane, the curator of Plate Stacks. I contacted both of them, referencing Liller in my introduction.

Alison replied to me that she will look into it in a few days. She reverted in just three days saying 'Hello Amar, BREAKING NEWS!!! I found it! Let me photograph the plate and jacket and send

you the images.' Josh also reverted by congratulating me 'Dear Amar and Alison (A&A!), How nice that you notified us, Amar, about the plate and your letter from Bill Liller. And now that Alison has found it, it's all "complete", Very nice all around'. History was etched, the photographic plate had been found!

I am overwhelmed that I, an amateur astronomer, could be involved in the tracing of this photographic plate at Harvard of a comet which is the only one named after an Indian astronomer Vainu Bappu. I am ever grateful to Liller, Josh and Alison for actually tracing this piece

of history, which for long (practically since 1949) had remained untraced and unknown to the Indian astronomy fraternity.

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