

Providing synonyms is a common practice with palaeontological journals, however others do not prefer this

- Yes, Giridih Coalfield is now in Jharkhand State
- Out of two specimens of *Noeggerathiopsis huslopi* in our collection, one is obtuse while the other has some what rounded apex (more than 90°), that is why we have written it as obtuse to rounded. The specific name *huslopi* is correct and *huslopi* is incorrect
- The genus *Glossopteris* was illustrated for the first time in 1822 by Brongniart, but he gave its description and the diagnosis in 1828 therefore correct date of description is 1828
- Yes, all the five specimens of *G browniana* were incomplete and therefore not illustrated. As mentioned, the specimens which are not illustrated in the plates do not require registration numbers
- In 1847, McCoy described the genus *Gangamopteris* as *Cyclopteris* (?) *angustifolia* but later he separated it from the *Cyclopteris* on the plea that it has constant anastomoses of veins while *Cyclopteris* does not have such anastomoses. Later, he formed the genus *Gangamopteris* and in 1875 he illustrated with specimens from Bacchus Marsh Beds in Victoria, Australia. So the authorship date of *Gangamopteris* is 1875 (neither 1847 nor 1860)
- Only those specimens which are illustrated are provided with Museum registration numbers. The remaining specimens of a given and studied taxon are also deposited in the Museum but they remain with the original field numbers. So if somebody wants to study all the specimens of a given taxon, he or she may get access to all of them in the Museum (Illustrated ones with registration numbers as given in the paper while the remaining ones with field numbers). We have illustrated three specimens of *Gangamopteris* because of their varied shapes. As far as the comparison of a given taxon is

concerned, it is always advisable to compare and match with the original authors. In this case *Gangamopteris cyclopteroides* was originally described by Feistmantel in 1876. We can also compare it with Maithy's specimen but then there is no limit of comparing, as more than 50 persons described this taxon so far.

- Although the specimen of *Glossopteris communis* lacks apex and base, yet its preserved middle portion clearly determines its shape to be lanceolate. Dr. Kanjilal perhaps did not see the original specimen of *G communis* instituted by Feistmantel in 1879. Feistmantel's specimens have a great variation range as far as the venation pattern is concerned. Had he seen these specimens, he would have refrained from making this comment. I, agree that Dr. Maithy worked on the genus *Glossopteris* but my Ph.D. was on the genus *Glossopteris* exclusively and it is always advisable to compare specimens with the holotype specimens or their figures.
- During referring, one of the referee also advised us to give the photograph of *Surangephyllum* in the plates and accordingly we sent a photo of it to the editor to be appended, as the original plates were with them. But the editor did not fix it on the plate and unfortunately it could not be illustrated.
- The term unaltered nature of biomass here means that the original plant material (mostly leaves) is preserved without any decay or without any crippling and it has well preserved phytollemma. Such kind of biomass is generally called unaltered one.
- The reference of Maithy 1965a and of Singh (2000) should have been in the text and similarly we missed to enlist the reference of Hughes (1868) and of Puri (1952) in the reference list.
- Now coming to the names of female workers. As far as my knowledge goes, there is no such ICBN code which advocates the use of full name in case of a female worker.

PETROLOGICAL AND PGE MINERALISATION STUDY OF THE CHANNAGIRI MAFIC-ULTRAMAFIC COMPLEX, SHIMOGA SUPRACRUSTAL BELT, KARNATAKA by T.C. Devaraju, T.T. Alapıeti, R.J. Kaukonen and T.L. Sudhakara.
Jour. Geol. Soc. India, v.70(4), 2007, pp.535-556

K.T. Vidyadharan, Flat No-310, Block-'B', Maharaja Residency, Balmatta, Mangalore - 575 001, **Email:** vidyathayal@yahoo.com, comments

I compliment Prof. Devaraju et al. for their excellent contribution on petrological and PGE mineralization aspects of the Channagiri mafic-ultramafic complex of Shimoga supracrustal belt.

Geological Survey of India (GSI) also carried out surface sampling and exploration work and the highlights

of work were published in 2005 and 2006. I would like to place on record that the important details pertaining to the three PGE mineralised zones in Hanumalapura block based on drilling and core sampling was recorded by the GSI. The summary and highlights of achievement for Hanumalapura block and the important observations made by the GSI working group from Operations Karnataka and Goa, Southern Region are as follows.

The comments on commercial potential by Prof. Devaraju et al. is in agreement with the observations made

by the Geological Survey of India. Since this is a well identified and confirmed target area for PGE (Vidyadharan and Palaniappan, 2006), the Geological Survey of India, as I understand is in the final stage of exploration for PGE in Hanumalapura block in Davangere district.

The contention of Prof. Devaraju regarding the PGE mineralized ultramafic units of Hanumalapura segment with signatures of basaltic komatiite to Fe-rich tholeiite is not well understood. However, as per the field evidence the complex shows typical and undoubted characteristics of a layered/differentiated body with mafic, ultramafic variants and late stage differentiates represented by titaniferous vanadiferous magnetite. Here, the co-genetic granophyres which generally are associated with Archaean layered bodies are missing.

T.C. Devaraju, 'Rajamangala', Saptapur, Haliyal Road, Dharwad-580001, **Email:** tcdevaraju@dataone.in, replies

We thank Dr. K. T. Vidyadharan for appreciation of our above cited paper.

Dr. Vidyadharan must be aware that evidence of PGE mineralization associated with the Hanumalapura segment of the Channagiri mafic-ultramafic complex was reported by us (Devaraju et al. 1994a, b, Alapieti et al. 1994) and since then have examined thoroughly not only the PGE mineralized Hanumalapura segment but also the Channagiri mafic-ultramafic complex as a whole and also several of the mafic-ultramafic bodies that occur within the Supracrustal belt of Shimoga (for references please see our

paper). Geological Survey of India initiated its own investigation of the complex in 2000-2001 and has fruitfully utilized the published information for carrying out further exploration in this area.

There is certainly considerable scope for supplementing whatever information we have been able to generate on the PGE mineralized Hanumalapura segment, which in our opinion is possibly hosting a commercially workable deposit. GSI with all the needed facilities at its command for proving the viability of the deposit for ultimate commercial exploitation, is certainly in a position to carry out adequate 3-dimensional investigation of the mineralized zone and also conduct beneficiation/extraction experiments which are crucial for establishing that the prospect is having workable PGE reserves and the ore is amenable for extraction of Pd and Pt, the main PGE metals contained in the ore.

In this connection, we might refer to our another paper, jointly authored by TTA, TCD & RJK (2007), which includes even geophysical data and preliminary results of beneficiation experiments and which is appearing in December 2007 issue (a special volume based 10th International Platinum Symposium) of "Mineralogy & Petrology" (Springer publication). The paper has already become available for on-line reference since October 16, 2007. These two publications of ours together provide a comprehensive account of a range of information gathered by us over a period of almost 14 long years on the Hanumalapura PGE prospect. We hope the GSI would greatly augment our information and come up with a more realistic account of the commercial value of the prospect.

References

- ALAPIETI, T T, HALKOAHO, T A A, DEVARAJU, T C and JAYARAJ, K R (1994) Chromite-hosted PGE mineralization in the Channagiri area, Karnataka state, India. VII International Platinum Symposium 1-4 August, 1994, Moscow, pp 3-4 (Abstract)
- DEVARAJU, T C, ALAPIETI, T T, HALKOAHO, T A A, JAYARAJ, K R and KHANADALI, S D (1994a) Evidence of PGE mineralization in the Channagiri mafic complex, Shimoga District, Karnataka. Jour Geol Soc India, v 43, pp 317-318
- DEVARAJU, T C, ALAPIETI, T T, HALKOAHO, T A A, JAYARAJ, K R and KHANADALI, S D (1994b) PGE mineralization in the Late Archaean Channagiri mafic complex, Shimoga District Karnataka state, India. 9th IAGOD Symp Beijing, China, 12-18 August, pp 266-267 (Abs)
- VIDYADHARAN, K T and PALANIAPPAN, K (2006) Mafic-ultramafic and related rocks of southern Indian Shield—Potential target areas for PGE Mineralisation. Jour Applied Geochemistry, v 8, pp 475-500