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A counterexample to a conjecture of Ghosh. (English) Zbl 1334.05143

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Summary: We answer two questions of *S. Ghosh* ["On certain classes of graceful lobsters", Preprint, [arXiv:1306.2932](https://arxiv.org/abs/1306.2932)] in the negative. We show that there exists a lobster tree of diameter less than 6 which accepts no alpha-labeling with two central vertices labeled by the critical number and the maximum vertex label. We also show a simple example of a tree of diameter 4, with an even degree central vertex which does not accept a maximum label in any graceful labeling.

MSC:

05C78 Graph labelling (graceful graphs, bandwidth, etc.)

Keywords:

graceful labeling; graceful tree conjecture; Bermond's conjecture; lobster

Full Text: [arXiv](#)