

Supplementary materials

Table S1 Collecting information of *A. rugioperculatus*

Name of the AEZs	Sample collected districts	Geographical coordinates
1. Old Himalayan Piedmont Plain	Thakurgaon	26.0057° N, 88.3748° E
2. Active Tista Floodplain	Nilphamari	25.9593° N, 88.8263° E
3. Tista Meander Floodplain	Dinajpur	25.6964° N, 88.6519° E
4. Karatoya-Bangali Floodplain	Sirajganj	24.1748° N, 89.5952° E
5. Lower Atrai Basin	Natore	24.1834° N, 88.9497° E
6. Lower Punarbhaba Floodplain	Chapainawabganj	24.6738° N, 88.1611° E
7. Active Brahmaputra-Jamuna Floodplain	Gaibandha	25.2816°N, 89.3512°E
8. Young Brahmaputra and Jamuna Floodplain	Jamalpur	24.9351° N, 89.9282° E
9. Old Brahmaputra Floodplain	Mymensingh	24.7147° N, 90.4274° E
10. Active Ganges Floodplain	Rajshahi	24.4826° N, 88.3436° E
11. High Ganges River Floodplain	Jashore	23.1843° N, 89.1898° E
12. Low Ganges River Floodplain	Faridpur	23.6073° N, 89.8490° E
13. Ganges Tidal Floodplain	Barishal	22.6942° N, 90.3481° E
14. Gopalganj Khulna Bils	Bagerhat	22.7747° N, 89.7056° E
15. Arial Bil	Munshiganj	23.5382° N, 90.5186° E
16. Middle Meghna River Floodplain	Kishoreganj	24.4046° N, 90.8132° E
17. Lower Meghna River Floodplain	Chandpur	23.1256° N, 90.7455° E
18. Young Meghna Estuarine Floodplain	Noakhali	22.7876° N, 90.9763° E
19. Old Meghna Estuarine Floodplain	Cumilla	23.5189° N, 90.7207° E
20. Eastern Surma Kushiyara Floodplain	Sylhet	24.9087° N, 91.9008° E
21. Sylhet Basin	Netrokona	24.8413° N, 90.7272° E
22. Northern and Eastern Piedmont Plains	Habiganj	24.2794° N, 91.3578° E
23. Chattogram Coastal Plain	Feni	23.0127° N, 91.3751° E
24. St. Martin's Coral Island	Saint Martin	20.6293° N, 92.3159° E
25. Level Barind Tract	Bogura	24.8136° N, 89.3813° E
26. High Barind Tract	Naogaon	24.8301° N, 88.8961° E
27. North Eastern Barind Tract	Rangpur	25.4473° N, 89.3143° E
28. Madhupur Tract	Gazipur	23.9698° N, 90.4284° E
29. Northern and Eastern Hills	Chattagram	22.3257° N, 91.8105° E
30. Akhaura Terrace	Brahmanbaria	23.9773° N, 91.0763° E

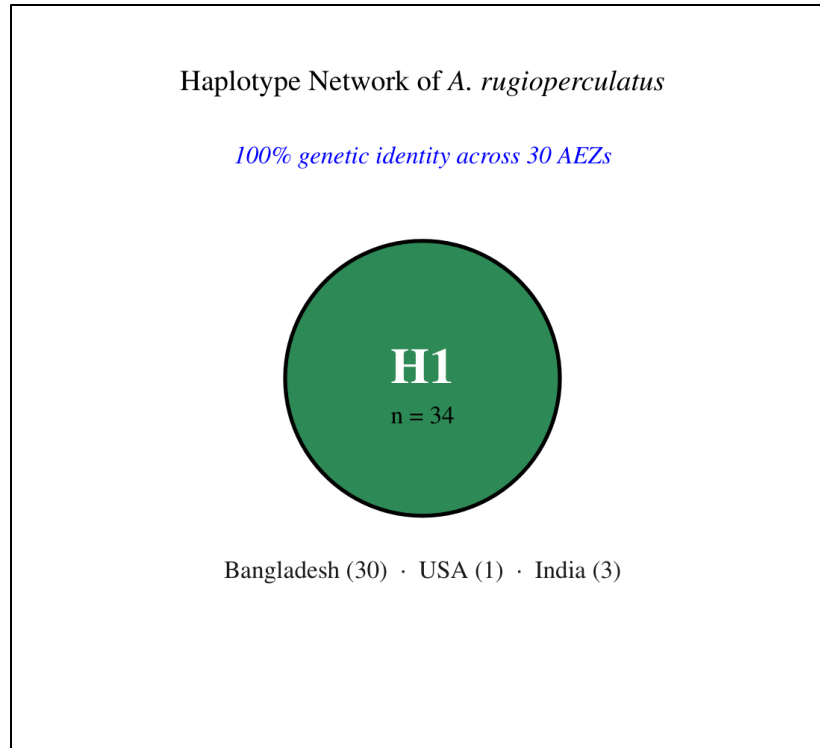


Fig. S1 TCS haplotype network of *A. rugiopectulatus* based on 615 bp of the mitochondrial COI gene. Circle size is proportional to haplotype frequency. All 34 *A. rugiopectulatus* sequences (30 Bangladesh isolates + USA + India) collapsed into a single dominant node (H1, n = 34), with no mutational steps separating population