**Figures:**

****

**Fig. 1**

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| --- |
| D:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\Dia histogram.-2.TIF  **% of *D*** **(cm) range**  ***R. stylosa***  ***B. gymnorrhiza* (Down)**  ***B. gymnorrhiza* (Up)**  ***D* (cm) range** |

**Fig. 2**

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| --- |
| (b))  **C:\Users\Acer\OneDrive\Desktop\Presentation1.tifC:\Users\Acer\OneDrive\Desktop\Presentation1.tifD:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\Mean BGB-2.TIFD:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\Mean AGB-2.TIFC:\Users\Acer\OneDrive\Desktop\Presentation1.tifD:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\Mean Fine roots-2.TIF**  a  b  b  (a))  **Mean fine root mass (Mg ha-1)**  a  a  a  a  b  a  (c))  **Mean *AGB* (Mg ha-1)**  a  **Mean *BGB*coarse (Mg ha-1)** |

**Fig. 3 (a)-(c)**

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| --- |
| **C:\Users\Acer\OneDrive\Desktop\Presentations\LLLL.tifD:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\H-D All (Final) - (2 coefficients) -3.tif**  ***D* (cm)**  ***H*** **(m)** |

a

***ρ* (ha-1)**

a

***H*** **(m)**

c

c

***H*** **(m)**

**Fig. 4**

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| D:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\1.Density-AGB (R.S) - Altogether.TIF  ***w*t (kg)**  C:\Users\Acer\OneDrive\Desktop\New Microsoft Office PowerPoint Presentation (2).tif  ***ρ* (ha-1)**  ***ρ* (ha-1)** |

**Fig. 5**

**Figure legends:**

**Fig. 1:** Map around the study area along the Miyara river in Ishigaki Island, Japan.

**Fig. 2:** Histogram for stem diameter *D* distribution. Open, closed and cross hatched bars showing *R. stylosa*, downstream and upstream *B. gymnorrhiza* plots, respectively.

**Fig. 3:** Comparisons for (a) aboveground biomass *AGB* (Mg ha-1), (b) belowground biomass *BGB* (Mg ha-1) and (c) fine roots mass (Mg ha-1), respectively. Open, closed and cross hatched bars showing *R. stylosa* plots, downstream *B. gymnorrhiza* plots and upstream *B. gymnorrhiza* plots, respectively. The error bar means standard deviation (SD). Here, Values matched with the different letters were statistically significant *p* < 0.05.

**Fig. 4:** Stem diameter *D* **-** height *H* relationship of *R. stylosa* and *B. gymnorrhiza* along the river. Here, open circle, open square and closed triangle indicates *R. stylosa*, downstream *B. gymnorrhiza* and upstream *B. gymnorrhiza* plots, respectively. The solid, dashed and dotted lines mean the regression analysis results respectively for *R. stylosa*, downstream *B. gymnorrhiza* and upstream *B. gymnorrhiza* plots, on the basis of Eq. 7 (*R*2 of 0.49, 0.46 and 0.45, respectively).

**Fig. 5:**  Tree density *ρ* – mean individual phytomass *w*t relationships on log-log coordinates. Here, open circle, open square and closed triangle representing *R. stylosa,* downstream *B. gymnorrhiza* and upstream *B. gymnorrhiza*, respectively. The solid, dashed and dotted lines mean the regression analysis results respectively for *R. stylosa*, downstream *B. gymnorrhiza* and upstream *B. gymnorrhiza* plots, on the basis of Eq. 6 (*R*2 of 0.99, 0.94 and 0.95, respectively).

**Appendix**

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| D:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\B. gym (Up)-ALL (Final) - (2 coefficients).TIFD:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\B. gym (Down)-ALL (Final) - (2 coefficients).TIFD:\Final Data on  15 February, 2022 Revised\Kal Ishigaki-4\R. stylosa-ALL (Final) - (2 coefficients).TIF  (a))  (c)  (b)  ***D* (cm)**  ***D* (cm)**  ***H*** **(m)**  ***H*** **(m)**  ***D* (cm)**  ***H*** **(m)**  ***H*** **(m)**  c |

**Fig. S6**

**Fig. S6:** The stem diameter *D ˗* height *H* relationships of a) *R. stylosa* plots, b) downstream *B. gymnorrhiza* plots and c) upstream *B. gymnorrhiza* plots, respectively wherever each line represents a regression result for each plot based on Eq. 7.

**Fig. S7**

**Fig. S7:** One of the*R. stylosa* plots near the edge of the river. Some of the *R. stylosa* trees were severely damaged.