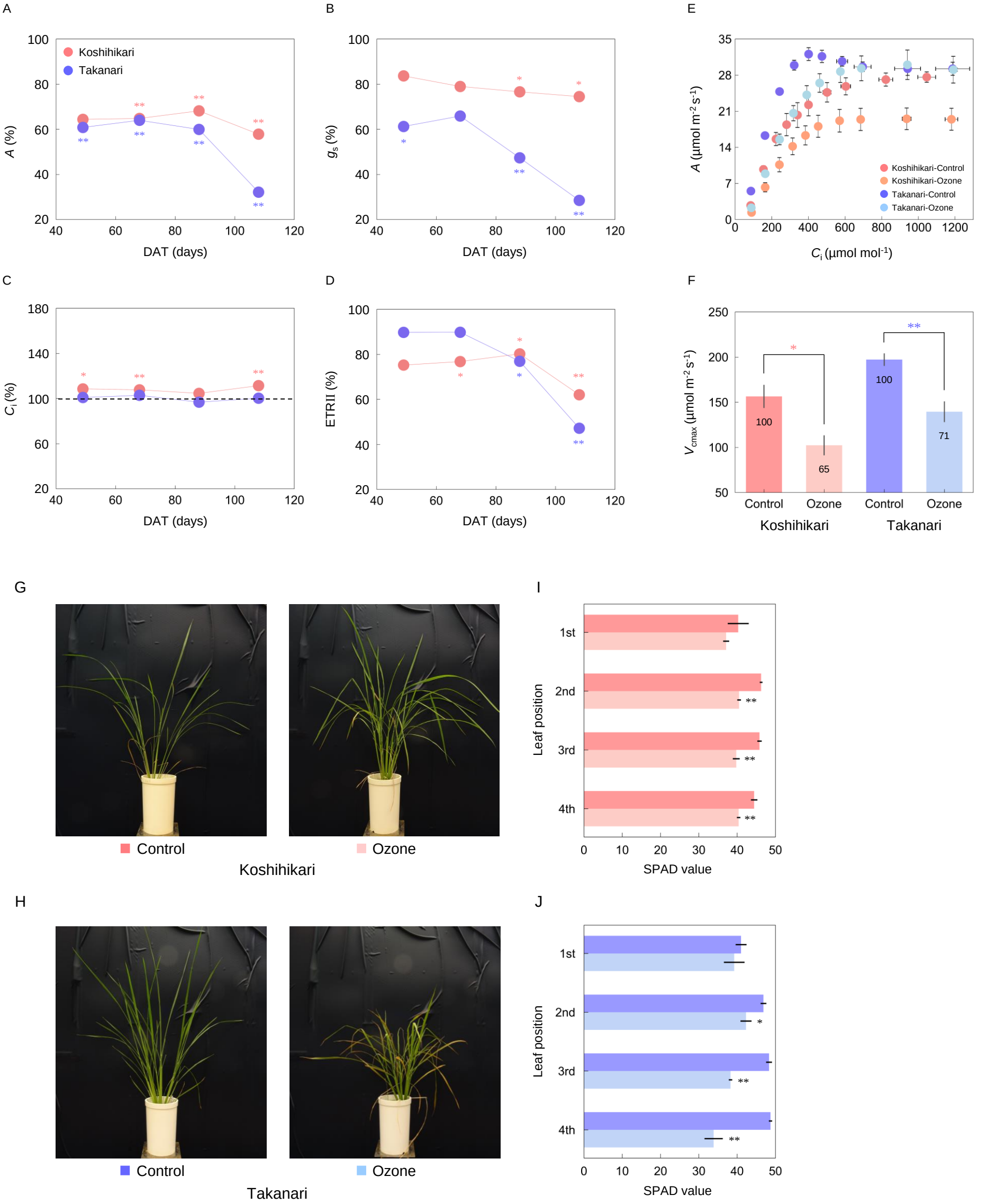

Figure 2. Photosynthesis-related parameters and plant appearance of Koshihikari and Takanari rice cultivars under control and chronic O_3 conditions in 2019.

(A) CO_2 assimilation rate (A), (B) stomatal conductance (g_s), (C) intercellular CO_2 concentration (C_i), and (D) electron transport rate for photosystem II (ETRII) per unit leaf area were measured in fully expanded leaves of Koshihikari (red) and Takanari (blue) at 49–50, 68–69, 88–89, and 108–109 days after the beginning of treatment (DAT) in 2019. The measurements were conducted at a CO_2 concentration of 400 μmol mol^{-1}, a PPFD of 1500 μmol m^{-2} s^{-1}, and an air temperature of 30° C. The results are shown as relative values (%) obtained under chronic O_3 conditions (pale color) to those obtained under control (deep color) conditions (n = 4–6 for each condition). In addition, (E) A was measured under a series of CO_2 concentrations of 100, 200, 300, 400, 500, 600, 750, 900, 1200 and 1500 μmol mol^{-1} at 54–56 DAT in 2019. (F) The maximum rate of ribulose-1,5-bisphosphate (RuBP) carboxylation (Vc_{max}) was estimated. The pictures of the plant appearance of (G) Koshihikari (red) and (H) Takanari (blue) under control (deep color) and chronic O_3 (pale color) conditions were taken at 53 DAT in 2019. In addition, the SPAD value was measured on the top 1st, 2nd, 3^{rd,} and 4th leaves (I) Koshihikari and (J) Takanari plants at 49–50 DAT in 2019. Vertical and horizontal bars in each panel indicate the standard error (n = 4–5). * and ** indicate significant differences of each parameter under control and chronic O_3 conditions in Koshihikari and Takanari at $p < 0.05$ and 0.01, respectively. The dashed line represents the line where the value for each trait is 100%. The values in each column in panel (F) represent the relative value under chronic O_3 conditions to that under control conditions.