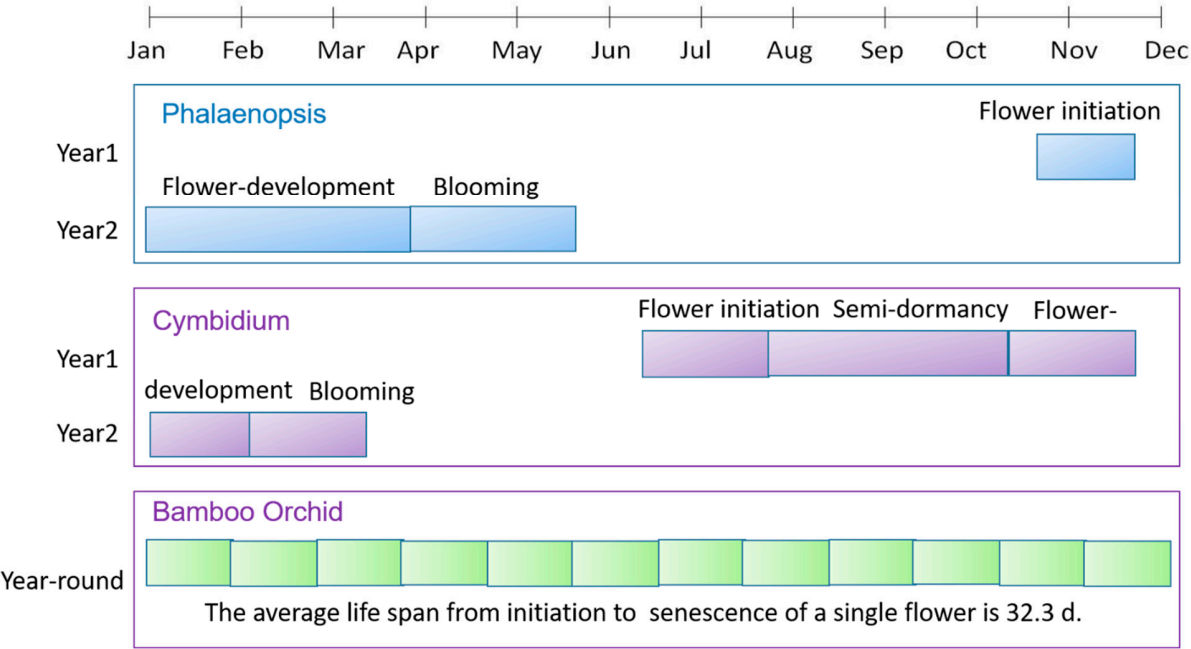
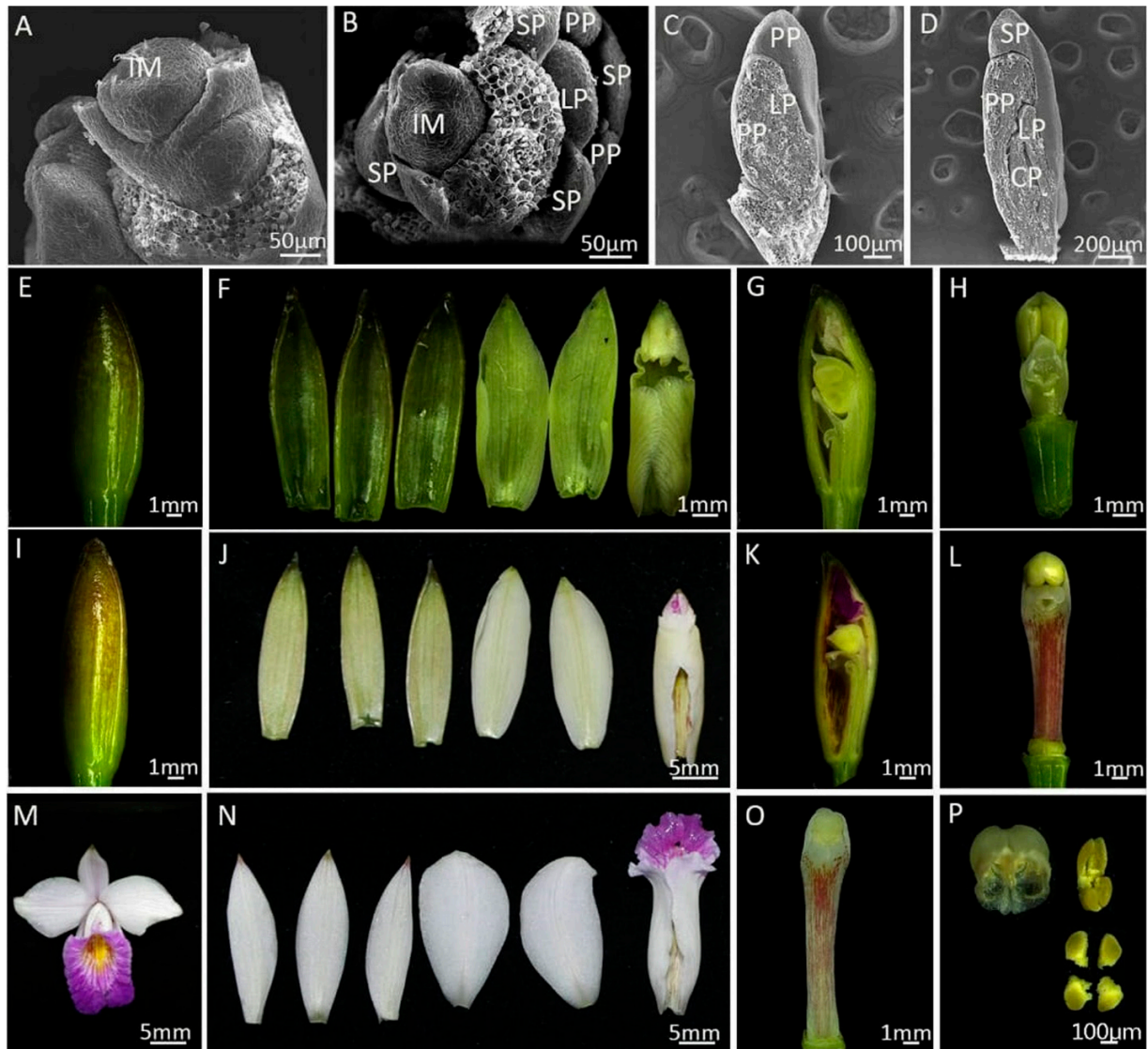


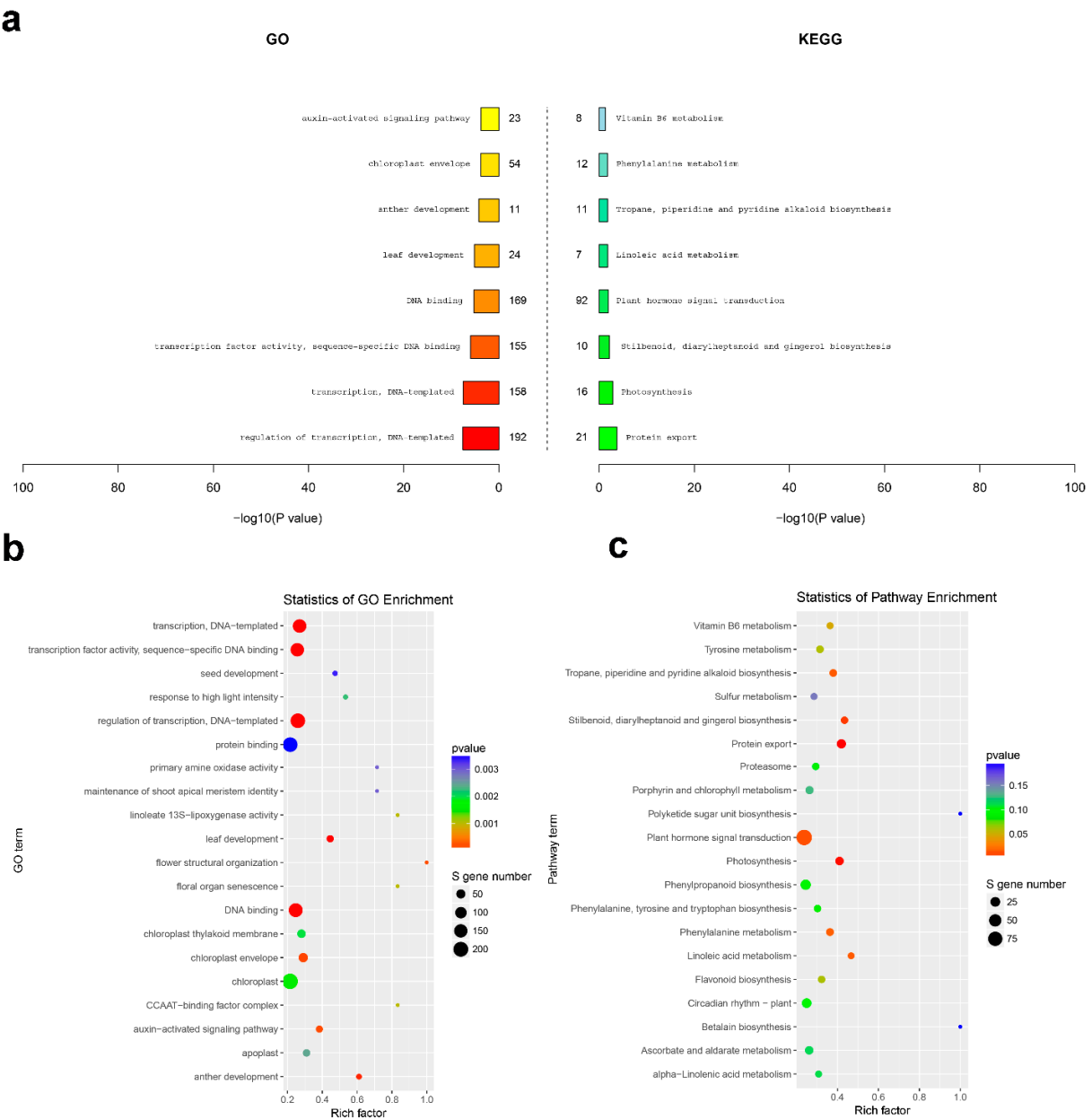
Supplementary Figure S1. Comparison of flowering habit of bamboo orchid with seasonal flowering species.



Supplementary Figure S2 Stages of flower development in *Arundina graminifolia*. A: Stage 0 (IM: inflorescence meristem); B: Stage 1 (IM: inflorescence meristem, PP: petal primordia, SP: sepal primordia); C: Stage 2 (PP: petal primordia, SP: sepal primordia, LP: lip primordia, CP: carpel primordia); D-G: Stage 3; H-K: Stage 4; M-O: Stage 5; L: mature flower.



Supplementary Figure S3 GO and KEGG annotation of Degradome sequencing and overview of conserved miRNA families. a: most popular GO and KEGG categories of Degradome sequences; b&c: relative abundance of GO and KEGG enrichment for Degradome sequencing.

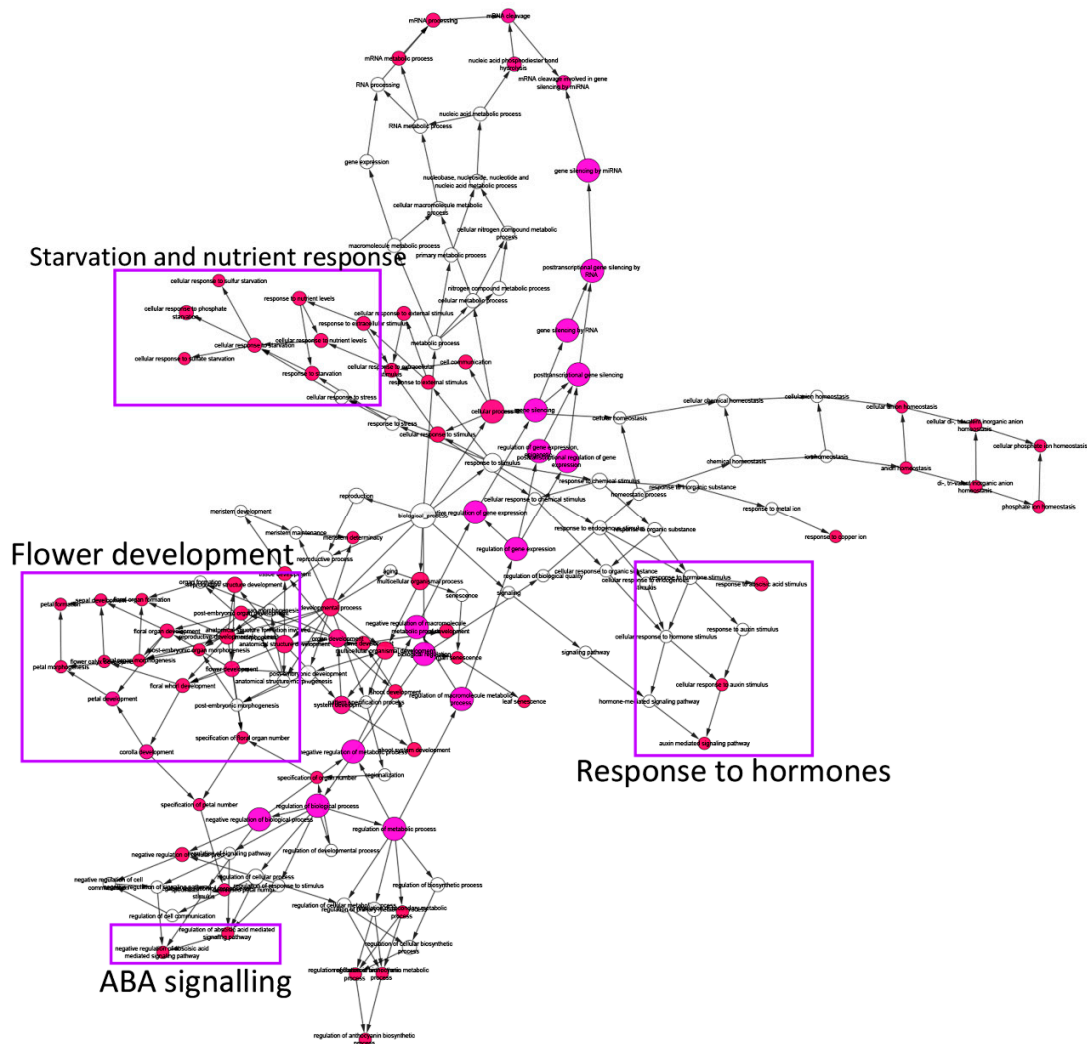


Supplementary Figure S4 Categories of conserved miRNAs based on their biological process

MIR319 MIR159 MIR399 MIR168 MIR166 MIR165 MIR395 MIR164 MIR161 MIR172 MIR160 MIR390 MIR170	Gene silencing by miRNA Posttranscriptional gene silencing by RNA Gene silencing by RNA Posttranscriptional gene silencing Gene silencing Posttranscriptional regulation of gene expression Regulation of gene expression, epigenetic Negative regulation of gene expression Negative regulation of macromolecule metabolic process Negative regulation of metabolic process Negative regulation of biological process Regulation of gene expression Regulation of macromolecule metabolic process Regulation of metabolic process Regulation of biological process Biological regulation Cellular process
MIR166 MIR164 MIR172 MIR319 MIR160	Organ development System development Anatomical structure development Multicellular organismal development Multicellular organismal process Developmental process
MIR164 MIR172 MIR160	Flower development Reproductive structure development Reproductive developmental process
MIR166 MIR164	MRNA cleavage involved in gene silencing by miRNA MRNA cleavage Nucleic acid phosphodiester bond hydrolysis MRNA processing MRNA metabolic process
MIR164 MIR160	Floral organ development Petal development Corolla development Floral whorl development Post-embryonic organ development
MIR399 MIR395	Cellular response to phosphate starvation Cell communication Cellular response to starvation Response to external stimulus Response to starvation Cellular response to nutrient levels Response to nutrient levels Cellular response to external stimulus Cellular response to extracellular stimulus Response to extracellular stimulus
MIR319 MIR160	Leaf development Shoot development Shoot system development Phyllome development
MIR166 MIR172 MIR159 MIR160 MIR159 MIR164 MIR159	Tissue development Response to abscisic acid stimulus Negative regulation of cellular process Negative regulation of abscisic acid mediated signaling Regulation of abscisic acid mediated signaling pathway
MIR164	Specification of petal number Specification of decreased petal number Specification of organ number Specification of floral organ number Petal formation Petal morphogenesis Floral organ formation Leaf senescence Organ senescence Floral organ morphogenesis Post-embryonic organ morphogenesis
MIR160	Sepal development Flower calyx development Regulation of anthocyanin biosynthetic process Regulation of anthocyanin metabolic process Regulation of flavonoid biosynthetic process Regulation of secondary metabolic process Auxin mediated signaling pathway
MIR395	Cellular response to auxin stimulus Cellular response to sulfur starvation Cellular response to sulfate starvation Cellular anion homeostasis Cellular di-, tri-valent inorganic anion homeostasis Cellular phosphate ion homeostasis Di-, tri-valent inorganic anion homeostasis Phosphate ion homeostasis Anion homeostasis
MIR172 MIR408	Meristem determinacy Response to copper ion

activities

Supplementary Figure S5 Clustering analysis of conserved miRNAs; f: families of miRNAs. Color intensity shows the stronger correlation.



Supplementary Figure S6 Families of miRNAs.

