The parameters for denovo assembly as follows:

ustacks -f -o -i -M 6 -m 2 -p 16 --deleverage

cstacks -s -n 4 -p 32

sstacks -s -c -p 16 -o

gstacks -P -M -t 16 （）

populations -P -M -t 16 -O

The calculated parameters of Hw, Ho, He, Fst by Stacks are as follows:

--vcf --fasta\_loci --hwe --fstats -k