

ERGA Assembly Report

v24.10.15

Tags: ERGA-BGE

TxID	1795686
ToLID	qqChaOliv1
Species	Chaetopelma olivaceum
Class	Arachnida
Order	Araneae

Genome Traits	Expected	Observed
Haploid size (bp)	4,899,563,537	5,076,251,623
Haploid Number	9 (source: ancestor)	33
Ploidy	2 (source: ancestor)	2
Sample Sex	unknown	XXX

EBP metrics summary and curation notes

Obtained EBP quality metric for hap1: 8.8.Q70
Obtained EBP quality metric for hap2: 8.8.Q70

The following metrics were automatically flagged as below EBP recommended standards or different from expected:

- . Observed Haploid Number is different from Expected
- . Observed sex is different from Sample sex
- . BUSCO duplicated value is more than 5% for hap1
- . Kmer completeness value is less than 90 for hap2
- . BUSCO duplicated value is more than 5% for hap2

Curator notes

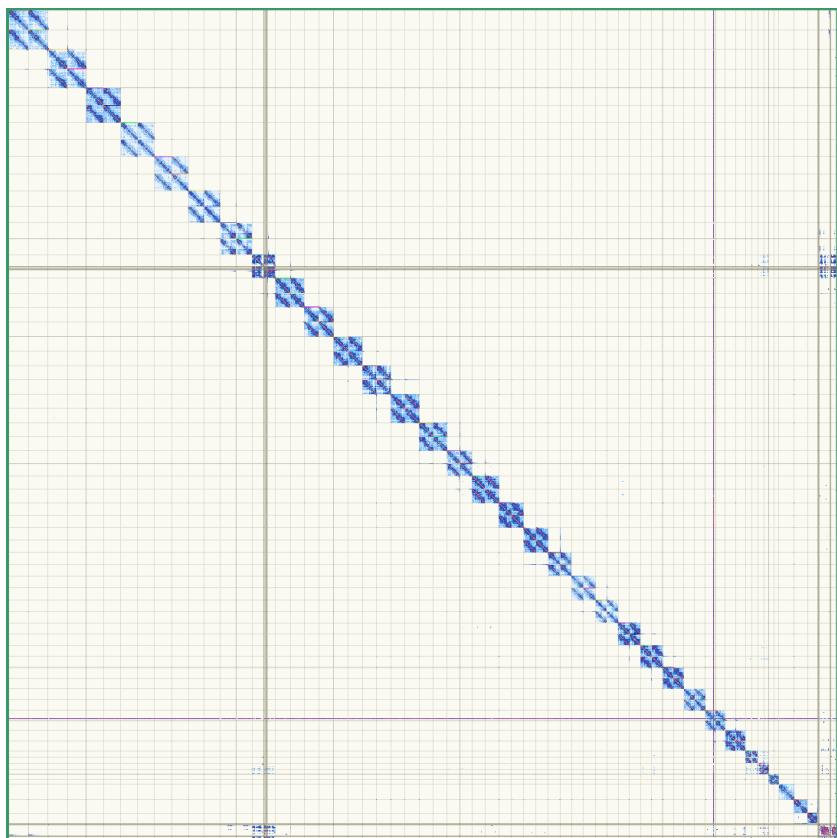
- . Interventions/Gb:
- . Contamination notes: "5,851,380 bp contained in 75 sequences were considered contaminants by FCS-GX and removed from hap1. Additionally, 2,128,985 contained in 32 sequences were also considered contaminants and removed from hap2. The longest removed contigs for hap1 and hap2 were 263,942 and 160,176 bp, respectively."
- . Other observations: "This genome assembly was produced by assembling ONT data with Hifiasm and then scaffolding with Yahs. Given the good quality of both haplotypes, curation was made in diploid mode and we are planning to submit both haplotypes to the ENA. Curation made 2 cuts in contigs, 5 breaks at gaps and 40 joins. 3 sex chromosomes were identified during curation based on half coverage, given their structure and based on some of the existant knowledge in spiders, we believe that they correspond to 3 X chromosomes. The mitogenome was successfully assembled with FOAM."

Quality metrics table

Metrics	Pre-curation hap1	Pre-curation hap2	Curated hap1	Curated hap2
Total bp	5,070,272,142	4,434,489,659	5,076,251,623	5,076,251,623
GC %	40.97	40.79	40.96	40.96
Gaps/Gbp	2.56	6.31	6.5	6.5
Total gap bp	2,600	5,600	6,600	6,600
Scaffolds	898	266	807	807
Scaffold N50	158,663,373	154,201,259	158,462,686	158,462,686
Scaffold L50	14	13	14	14
Scaffold L90	30	26	29	29
Contigs	911	294	840	840
Contig N50	144,858,072	131,742,126	137,120,474	137,120,474
Contig L50	15	14	15	15
Contig L90	35	34	34	34
QV	68.111	68.896	70.2331	70.2487
Kmer compl.	93.1278	85.1184	93.1057	85.0959
BUSCO sing.	92.3%	89.6%	92.4%	92.4%
BUSCO dupl.	5.6%	3.9%	5.5%	5.5%
BUSCO frag.	1.2%	1.6%	1.1%	1.1%
BUSCO miss.	1.0%	4.9%	1.0%	1.0%

BUSCO: 6.0.0 (euk_genome_min, miniprot) / Lineage: arachnida_odb12 (genomes:34, BUSCOs:1123)

HiC contact map of curated assembly

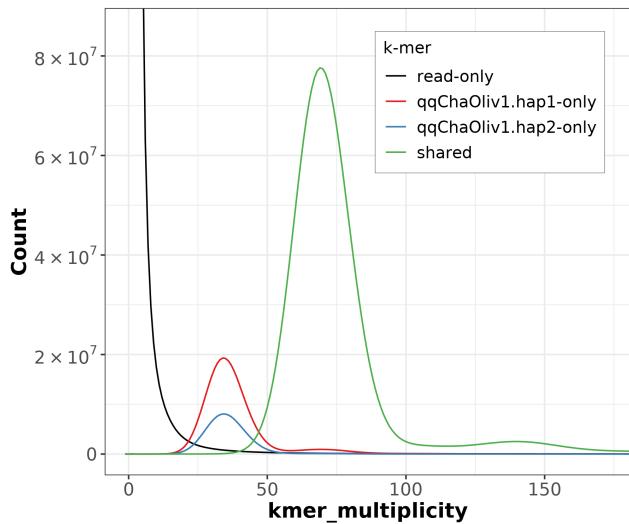


hap1 [\[LINK\]](#)

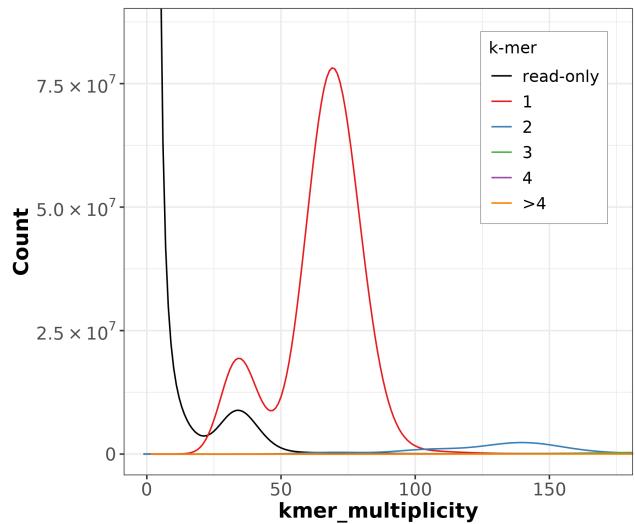
hap2 HiC PNG is missing!

hap2 File link is missing!

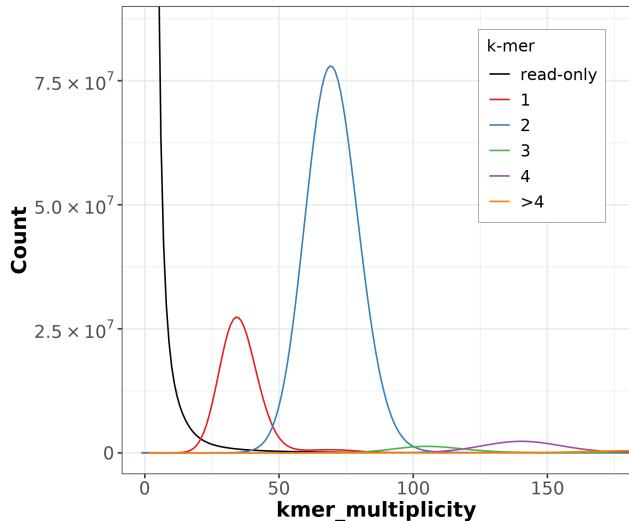
K-mer spectra of curated assembly



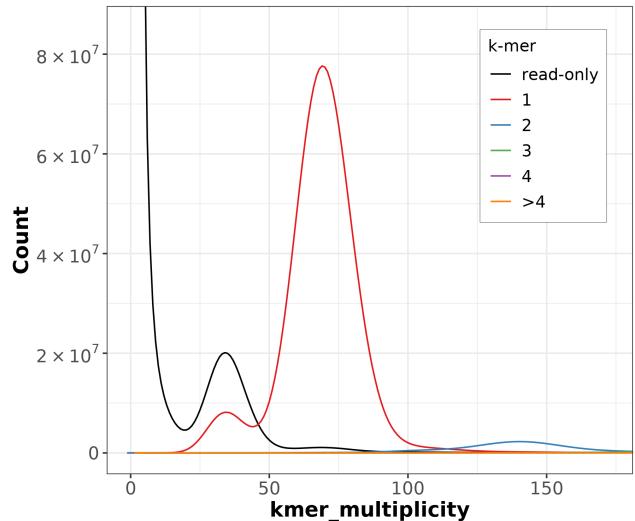
Distribution of k-mer counts coloured by their presence in reads/assemblies



Distribution of k-mer counts per copy numbers found in **hap1** (hapl.)



Distribution of k-mer counts per copy numbers found in **asm** (dipl.)



Distribution of k-mer counts per copy numbers found in **hap2** (hapl.)

Post-curation contamination screening

Data profile

Data	ONT	Illumina	Omni-C
Coverage	64	17	32

Assembly pipeline

```
- CLAWS
    |_ ver: v3.0
    |_ key param: NA
- Filtlong
    |_ ver: v0.2.1
    |_ key param: --minlen 1000
    |_ key param: --min_mean_q 80
    |_ key param: --target_bases 300000000000
- Hifiasm
    |_ ver: 0.24.0
    |_ key param: --ont
    |_ key param: --telo-m ACCCCG
    |_ key param: -h1 -h2
- Yahs
    |_ ver: 1.2a
    |_ key param: -mq 10
    |_ key param: --no-contig-ec
- FOAM
    |_ ver: 0.5
    |_ key param: NA
```

Curation pipeline

```
- FCS-GX
    |_ ver: None
    |_ key param: NA
- PretextViewAI
    |_ ver: 1.0.5
    |_ key param: NA
```

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