Attention: this file was produced automatically, and some statistics might not make sense for certain pipelines.

 $\textbf{Revision:} \quad b' bigraph-v0.2.0-313-g0a90677'$ 

This file contains statistics about the following genome(s):

 $\bullet \quad \text{Flye\_comparison C.elegans "genome": "C.elegans", "assembler": "wtdbg2": "cli\_arguments": "-x": "rs"}$ 

Table 1: Genome Graph Statistics

Table 2: Algorithm Statistics

| Parameter                                | wtdbg2 sfa | Y-to-V sfa | Y-to-V | wtdbg2 | flye raw | flye corr |
|--|------------|------------|--------|--------|----------|-----------|
| min non-trivial omnitigs per macrotig    | N/A        | N/A        | N/A    | N/A    | N/A      |           |
| max non-trivial omnitigs per macrotig    | N/A        | N/A        | N/A    | N/A    | N/A      |           |
| median non-trivial omnitigs per macrotig | N/A        | N/A        | N/A    | N/A    | N/A      |           |
| mean non-trivial omnitigs per macrotig   | N/A        | N/A        | N/A    | N/A    | N/A      |           |
| min edge length                          | 1          | 1          | N/A    | N/A    | N/A      |           |
| max edge length                          | 5552       | 5552       | N/A    | N/A    | N/A      |           |
| median edge length                       | 30         | 30         | N/A    | N/A    | N/A      |           |
| mean edge length                         | 394.7      | 394.7      | N/A    | N/A    | N/A      |           |

Table 3: ContigValidator

| Parameter | wtdbg2 sfa | Y-to-V sfa | Y-to-V | wtdbg2 | flye raw | flye corr |
|-----------|------------|------------|--------|--------|----------|-----------|
|-----------|------------|------------|--------|--------|----------|-----------|

Table 4: QUAST: # of contigs

|                        |            |            | //     | -0     |          |           |
|------------------------|------------|------------|--------|--------|----------|-----------|
| Parameter              | wtdbg2 sfa | Y-to-V sfa | Y-to-V | wtdbg2 | flye raw | flye corr |
| # contigs (≥ 0 bp)     | 261        | 314        | 275    | 192    | 91       | 124       |
| # contigs (≥ 1000 bp)  | 261        | 312        | 274    | 192    | 91       | 124       |
| # contigs (≥ 5000 bp)  | 252        | 298        | 267    | 189    | 88       | 118       |
| # contigs (≥ 10000 bp) | 206        | 240        | 217    | 150    | 86       | 115       |
| # contigs (≥ 25000 bp) | 154        | 191        | 170    | 105    | 80       | 111       |
| # contigs (≥ 50000 bp) | 134        | 161        | 147    | 90     | 68       | 97        |

Table 5: QUAST: total length of contigs

| Parameter                                | wtdbg2 sfa | Y-to-V sfa | Y-to-V    | wtdbg2   | flye raw  | flye corr |
|--|------------|------------|-----------|----------|-----------|-----------|
| Total length ( $\geq 0$ bp)              | 100859688  | 152632834  | 152282179 | 98782647 | 101440945 | 101726343 |
| Total length (≥ 1000 bp)                 | 100859688  | 152631279  | 152281457 | 98782647 | 101440945 | 101726343 |
| Total length (≥ 5000 bp)                 | 100825051  | 152579748  | 152253245 | 98773465 | 101432411 | 101709629 |
| Total length (≥ 10000 bp)                | 100501684  | 152169058  | 151886811 | 98491939 | 101418263 | 101691774 |
| Total length (≥ 25000 bp)                | 99689827   | 151380714  | 151131959 | 97805986 | 101297339 | 101605461 |
| Total length ( $\geq 50000 \text{ bp}$ ) | 98991259   | 150333341  | 150360266 | 97285503 | 100882932 | 101104316 |

Table 6: QUAST: statistics for contigs  $\geq$  500bp (or 3000bp for QUAST-LG)

| TWO CO. GOADI. Statistics for contrigs 2 3000b (or 30000b for GCADI-LG) |            |            |           |           |           |           |  |  |  |
|---|------------|------------|-----------|-----------|-----------|-----------|--|--|--|
| Parameter   | wtdbg2 sfa | Y-to-V sfa | Y-to-V    | wtdbg2    | flye raw  | flye corr |  |  |  |
| # contigs   | 259        | 309        | 273       | 190       | 89        | 120       |  |  |  |
| Largest contig  | 6180070    | 6178933    | 6178932   | 6180070   | 5065916   | 4102934   |  |  |  |
| Total length  | 100855254  | 152625764  | 152280031 | 98778213  | 101436280 | 101716725 |  |  |  |
| Reference length  | 104169699  | 104169699  | 104169699 | 104169699 | 104169699 | 104169699 |  |  |  |
| GC (%)  | 35.61      | 35.70      | 35.70     | 35.63     | 35.53     | 35.52     |  |  |  |
| Reference GC (%)  | 35.67      | 35.67      | 35.67     | 35.67     | 35.67     | 35.67     |  |  |  |
| N50   | 1208751    | 1428633    | 1620942   | 1906099   | 2309765   | 1917212   |  |  |  |
| NG50  | 1205835    | 2039971    | 2546796   | 1854232   | 2279155   | 1889879   |  |  |  |
| N75   | 720918     | 763900     | 841540    | 949752    | 1455397   | 1027660   |  |  |  |
| NG75  | 640359     | 1425820    | 1524798   | 895623    | 1431538   | 1000927   |  |  |  |
| L50   | 24         | 31         | 27        | 19        | 15        | 20        |  |  |  |
| LG50  | 25         | 17         | 16        | 20        | 16        | 21        |  |  |  |
| L75   | 51         | 68         | 60        | 37        | 29        | 38        |  |  |  |
| LG75  | 55         | 32         | 29        | 41        | 30        | 40        |  |  |  |

| Parameter                    | wtdbg2 sfa | Y-to-V sfa | Y-to-V    | wtdbg2   | flye raw  | flye corr |
|------------------------------|------------|------------|-----------|----------|-----------|-----------|
| # misassemblies              | 66         | 137        | 145       | 76       | 80        | 61        |
| # unique misassemblies       | 65         | 112        | 120       | 75       | 83        | 63        |
| # misassembled contigs       | 45         | 89         | 87        | 47       | 39        | 38        |
| Misassembled contigs length  | 50809767   | 94614612   | 102619447 | 63840733 | 66488044  | 48898321  |
| # local misassemblies        | 157        | 304        | 296       | 162      | 57        | 50        |
| # unique local misassemblies | 156        | 215        | 213       | 158      | 59        | 52        |
| # scaffold gap ext. mis.     | 0          | 0          | 0         | 0        | 3         | 2         |
| # scaffold gap loc. mis.     | 0          | 0          | 0         | 0        | 2         | 2         |
| # possible TEs               | 6          | 20         | 20        | 6        | 0         | 2         |
| # unaligned mis. contigs     | 1          | 1          | 1         | 0        | 0         | 0         |
| # unaligned contigs          | 14 + 111p  | 12+165p    | 10 + 149p | 9 + 87p  | 0 + 58p   | 0 + 84p   |
| Unaligned length             | 682639     | 1068689    | 1095501   | 712079   | 501272    | 715144    |
| Genome fraction (%)          | 96.184     | 96.693     | 96.701    | 94.149   | 96.847    | 96.785    |
| Duplication ratio            | 1.000      | 1.505      | 1.501     | 1.000    | 1.000     | 1.002     |
| # N's per 100 kbp            | 0.00       | 0.00       | 0.00      | 0.00     | 1.77      | 1.38      |
| # mismatches per 100 kbp     | 31.01      | 36.91      | 36.68     | 32.01    | 7.08      | 7.16      |
| # indels per 100 kbp         | 49.37      | 50.39      | 50.28     | 50.11    | 39.60     | 39.58     |
| Largest alignment            | 3150502    | 3148999    | 3148846   | 3150502  | 3164784   | 3164733   |
| Total aligned length         | 100063381  | 151272529  | 150906291 | 97960020 | 100881958 | 100844681 |
| EA50max                      | 846349     | 978031     | 986630    | 945038   | 1177105   | 1081685   |
| Strict EA50max               | 590484     | 604113     | 621916    | 631804   | 980578    | 960423    |
| NGA50                        | 846349     | 1359914    | 1524225   | 945038   | 1177105   | 1081685   |
| EA75max                      | 418864     | 536678     | 536678    | 510912   | 677296    | 678280    |
| Strict EA75max               | 245444     | 308970     | 309257    | 292317   | 518885    | 535705    |
| NGA75                        | 416035     | 851548     | 855158    | 510912   | 677296    | 678280    |
| LGA50                        | 36         | 25         | 24        | 30       | 27        | 28        |
| LGA75                        | 79         | 50         | 48        | 67       | 55        | 58        |

Table 8: QUAST: misassembly statistics for contigs  $\geq$  500bp (or 3000bp for QUAST-LG)

| Parameter                   | wtdbg2 sfa | Y-to-V sfa | Y-to-V    | wtdbg2   | flye raw | flye corr |
|-----------------------------|------------|------------|-----------|----------|----------|-----------|
| # misassemblies             | 66         | 137        | 145       | 76       | 80       | 61        |
| # contig misassemblies      | 66         | 137        | 145       | 76       | 76       | 55        |
| # c. relocations            | 16         | 32         | 34        | 18       | 9        | 12        |
| # c. translocations         | 49         | 102        | 109       | 58       | 65       | 43        |
| # c. inversions             | 1          | 3          | 2         | 0        | 2        | 0         |
| # scaffold misassemblies    | 0          | 0          | 0         | 0        | 4        | 6         |
| # s. relocations            | 0          | 0          | 0         | 0        | 2        | 3         |
| # s. translocations         | 0          | 0          | 0         | 0        | 2        | 3         |
| # s. inversions             | 0          | 0          | 0         | 0        | 0        | 0         |
| # misassembled contigs      | 45         | 89         | 87        | 47       | 39       | 38        |
| Misassembled contigs length | 50809767   | 94614612   | 102619447 | 63840733 | 66488044 | 48898321  |
| # local misassemblies       | 157        | 304        | 296       | 162      | 57       | 50        |
| # scaffold gap ext. mis.    | 0          | 0          | 0         | 0        | 3        | 2         |
| # scaffold gap loc. mis.    | 0          | 0          | 0         | 0        | 2        | 2         |
| # mis. caused by frag. ref. | 0          | 0          | 0         | 0        | 0        | 2         |
| # possible TEs              | 6          | 20         | 20        | 6        | 0        | 2         |
| # unaligned mis. contigs    | 1          | 1          | 1         | 0        | 0        | 0         |
| # mismatches                | 31025      | 55833      | 55356     | 31353    | 7138     | 7221      |
| # indels                    | 49398      | 76228      | 75869     | 49091    | 39954    | 39912     |
| # indels (≤ 5 bp)           | 48331      | 74382      | 74036     | 48025    | 38850    | 38827     |
| # indels (> 5 bp)           | 1067       | 1846       | 1833      | 1066     | 1104     | 1085      |
| Indels length               | 158388     | 229862     | 238061    | 153973   | 174242   | 136500    |

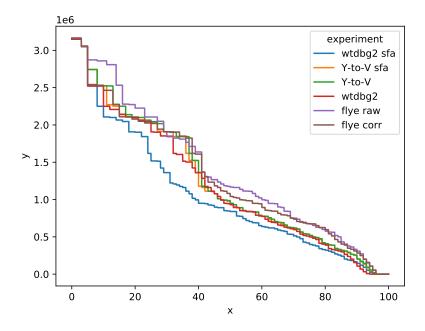


Figure 1: EAxmax

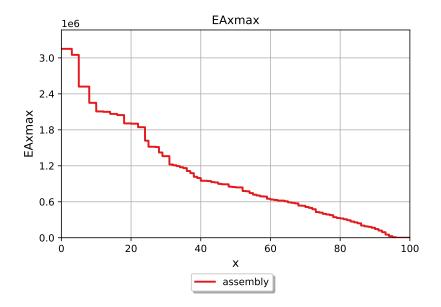


Figure 2: QUAST EAxmax graph for wtdbg2 sfa

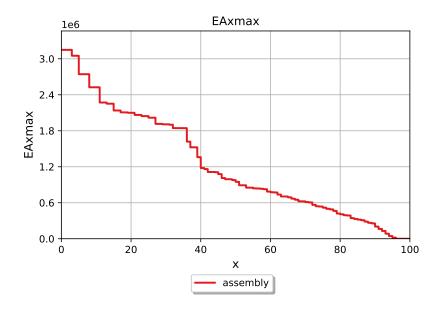


Figure 3: QUAST EAxmax graph for Y-to-V sfa

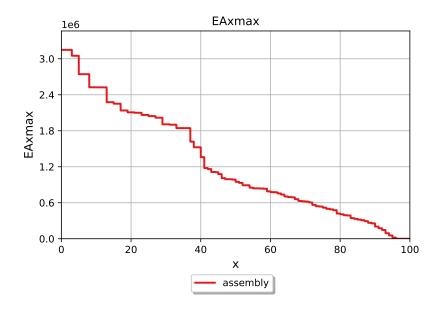


Figure 4: QUAST EAxmax graph for Y-to-V

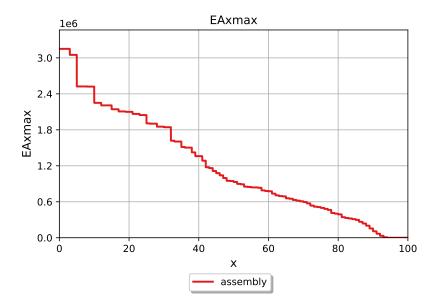


Figure 5: QUAST EAxmax graph for wtdbg2

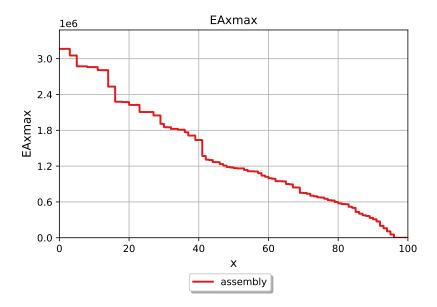


Figure 6: QUAST EAxmax graph for flye raw

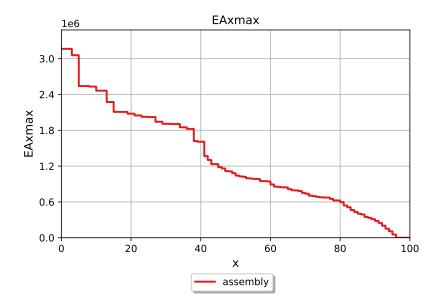


Figure 7: QUAST EAxmax graph for flye corr

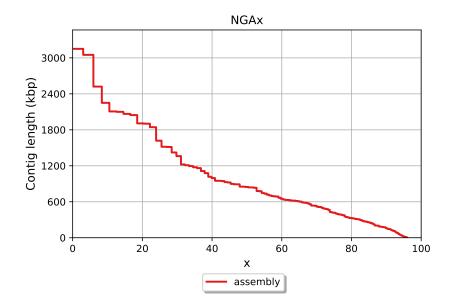


Figure 8: QUAST NGAx graph for wtdbg2 sfa

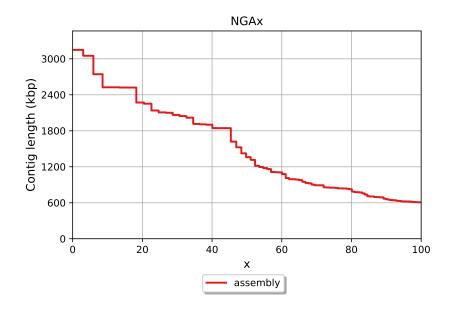


Figure 9: QUAST NGAx graph for Y-to-V sfa

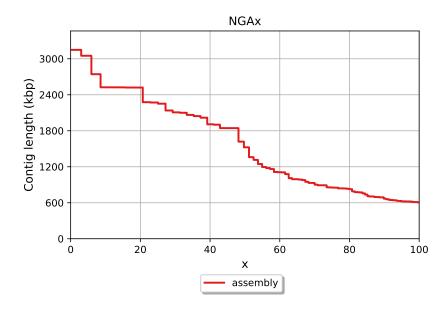


Figure 10: QUAST NGAx graph for Y-to-V

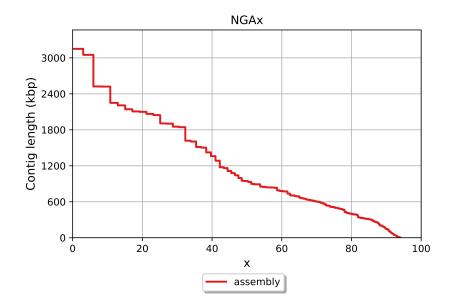


Figure 11: QUAST NGAx graph for wtdbg2  $\,$ 

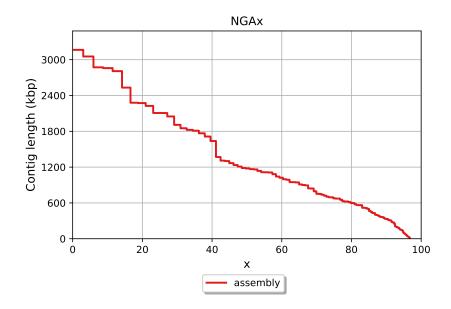


Figure 12: QUAST NGAx graph for flye raw

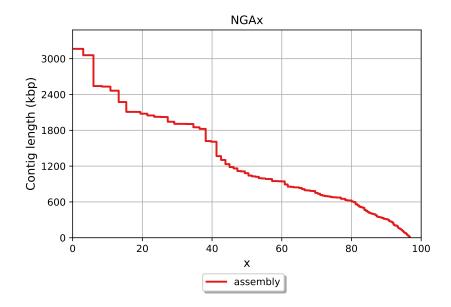


Figure 13: QUAST NGAx graph for flye corr  $\,$