Micro-Swarm Dump Report

dump_dir: dumps\Turbo-Evolution_Run_gpu_1
prefix: evo_turbo
steps: 10
normalization: local

Summary over time
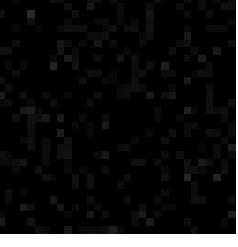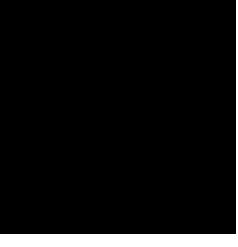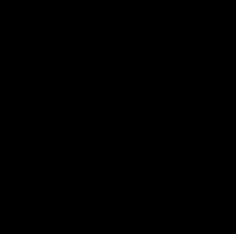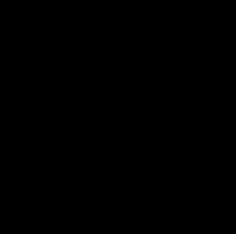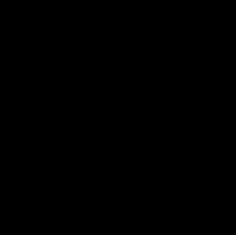
Field	mean	nonzero_ratio	norm_entropy
resources	(0.0148 .. 0.5473)	(0.0197 .. 1.0000)	(0.0395 .. 0.9620)
phero_food	(0.0000 .. 0.0470)	(0.0000 .. 1.0000)	(0.0000 .. 0.7853)
phero_danger	(0.0000 .. 0.0003)	(0.0000 .. 0.1016)	(0.0000 .. 0.1203)
molecules	(0.0000 .. 0.0011)	(0.0000 .. 0.4029)	(0.0000 .. 0.3192)
mycel	(0.0000 .. 0.5126)	(0.0000 .. 1.0000)	(0.0000 .. 0.9089)

System over time
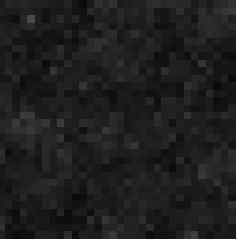
Metric	Sparkline
dna_global_size	(0.0000 .. 128.0000)
dna_s0	(0.0000 .. 256.0000)
dna_s1	(0.0000 .. 256.0000)
dna_s2	(0.0000 .. 256.0000)
dna_s3	(0.0000 .. 256.0000)
energy_s0	(0.4031 .. 0.9765)
energy_s1	(0.3874 .. 0.9733)
energy_s2	(0.4027 .. 0.9782)
energy_s3	(0.3816 .. 0.9791)
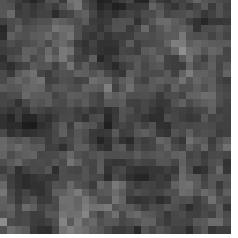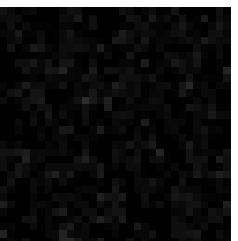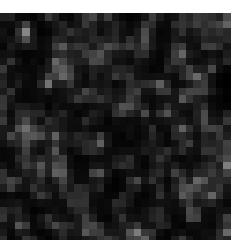
Step 0

Field	CSV	Stats	Preview
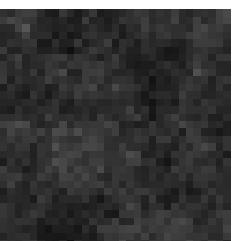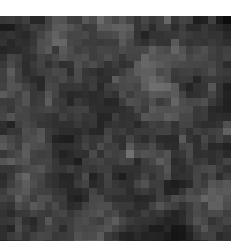
resources	evo_turbo_step000000_resources.csv	min=0.0000 max=1.0000 mean=0.0148 stddev=0.1065 nonzero_ratio=0.0197 p95=0.0000 entropy=0.1641 norm_entropy=0.0395	
phero_food	evo_turbo_step000000_phero_food.csv	min=0.0000 max=0.0000 mean=0.0000 stddev=0.0000 nonzero_ratio=0.0000 p95=0.0000 entropy=0.0000 norm_entropy=0.0000	
phero_danger	evo_turbo_step000000_phero_danger.csv	min=0.0000 max=0.0000 mean=0.0000 stddev=0.0000 nonzero_ratio=0.0000 p95=0.0000 entropy=0.0000 norm_entropy=0.0000	
molecules	evo_turbo_step000000_molecules.csv	min=0.0000 max=0.0000 mean=0.0000 stddev=0.0000 nonzero_ratio=0.0000 p95=0.0000 entropy=0.0000 norm_entropy=0.0000	
mycel	evo_turbo_step000000_mycel.csv	min=0.0000 max=0.0000 mean=0.0000 stddev=0.0000 nonzero_ratio=0.0000 p95=0.0000 entropy=0.0000 norm_entropy=0.0000	
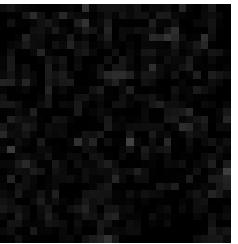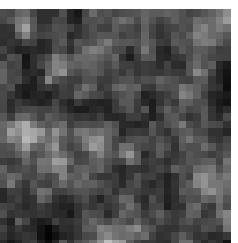
Step 200

Field	CSV	Stats	Preview
resources	evo_turbo_step000200_resources.csv	min=0.0020 max=1.0000 mean=0.1189 stddev=0.1059 nonzero_ratio=1.0000 p95=0.2200 entropy=2.7750 norm_entropy=0.6673	
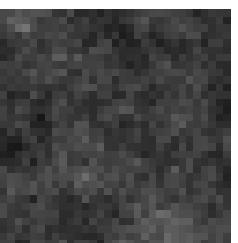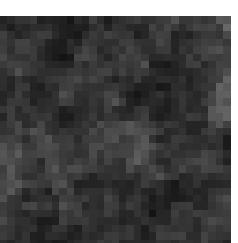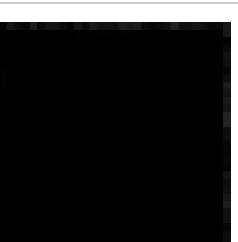
| Field	CSV	Stats	Preview
phero_food	evo_turbo_step000200_phero_food.csv	min=0.0000 max=0.1370 mean=0.0413 stddev=0.0142 nonzero_ratio=0.9996 p95=0.0670 entropy=3.2406 norm_entropy=0.7792	
phero_danger	evo_turbo_step000200_phero_danger.csv	min=0.0000 max=0.0360 mean=0.0003 stddev=0.0015 nonzero_ratio=0.0965 p95=0.0010 entropy=0.4830 norm_entropy=0.1161	
molecules	evo_turbo_step000200_molecules.csv	min=0.0000 max=0.0340 mean=0.0010 stddev=0.0022 nonzero_ratio=0.3928 p95=0.0060 entropy=1.2808 norm_entropy=0.3080	
mycel	evo_turbo_step000200_mycel.csv	min=0.0000 max=0.1370 mean=0.0169 stddev=0.0156 nonzero_ratio=0.9967 p95=0.0460 entropy=3.0188 norm_entropy=0.7259	
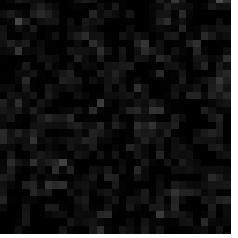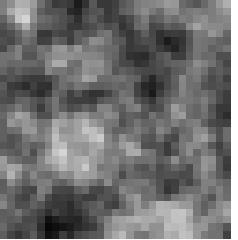
Step 400

| Field	CSV	Stats	Preview
resources	evo_turbo_step000400_resources.csv	min=0.0020 max=1.0000 mean=0.1826 stddev=0.1215 nonzero_ratio=1.0000 p95=0.3600 entropy=3.2150 norm_entropy=0.7731	
phero_food	evo_turbo_step000400_phero_food.csv	min=0.0000 max=0.1870 mean=0.0451 stddev=0.0164 nonzero_ratio=0.9999 p95=0.0750 entropy=3.0903 norm_entropy=0.7431	
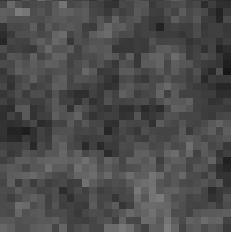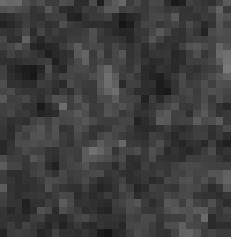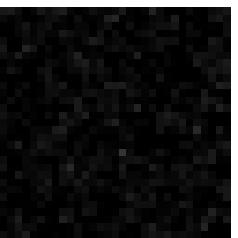
phero_danger	evo_turbo_step000400_phero_danger.csv	min=0.0000 max=0.0330 mean=0.0003 stddev=0.0015 nonzero_ratio=0.1016 p95=0.0010 entropy=0.5005 norm_entropy=0.1203	
molecules	evo_turbo_step000400_molecules.csv	min=0.0000 max=0.0280 mean=0.0011 stddev=0.0024 nonzero_ratio=0.3940 p95=0.0060 entropy=1.3048 norm_entropy=0.3137	
mycel	evo_turbo_step000400_mycel.csv	min=0.0110 max=0.1960 mean=0.0661 stddev=0.0237 nonzero_ratio=1.0000 p95=0.1090 entropy=3.4647 norm_entropy=0.8331	
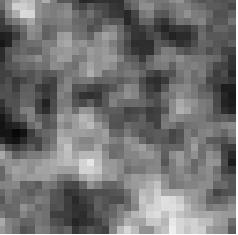
Step 600

Field	CSV	Stats	Preview
resources	evo_turbo_step000600_resources.csv	min=0.0020 max=1.0000 mean=0.2400 stddev=0.1374 nonzero_ratio=1.0000 p95=0.4600 entropy=3.4526 norm_entropy=0.8302	
phero_food	evo_turbo_step000600_phero_food.csv	min=0.0000 max=0.2240 mean=0.0461 stddev=0.0169 nonzero_ratio=0.9998 p95=0.0770 entropy=2.9092 norm_entropy=0.6995	
phero_danger	evo_turbo_step000600_phero_danger.csv	min=0.0000 max=0.0380 mean=0.0003 stddev=0.0015 nonzero_ratio=0.0974 p95=0.0010 entropy=0.4836 norm_entropy=0.1163	
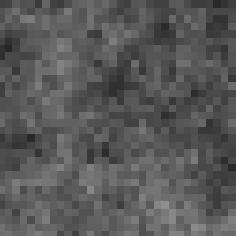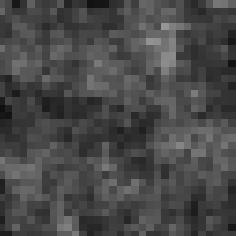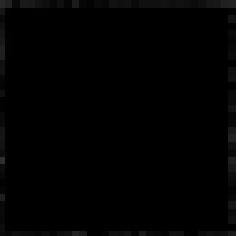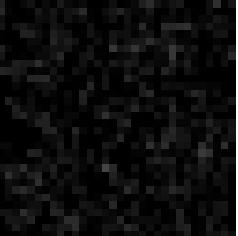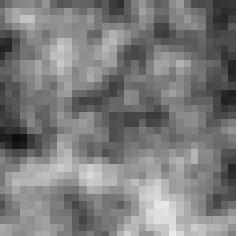
| molecules | evo_turbo_step000600_molecules.csv | min=0.0000
max=0.0230
mean=0.0011
stddev=0.0024
nonzero_ratio=0.3933
p95=0.0060
entropy=1.3119
norm_entropy=0.3154 | |
| mycel | evo_turbo_step000600_mycel.csv | min=0.0450
max=0.2860
mean=0.1454
stddev=0.0367
nonzero_ratio=1.0000
p95=0.2100
entropy=3.6740
norm_entropy=0.8834 | |

Step 800
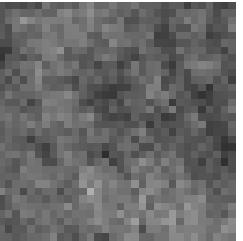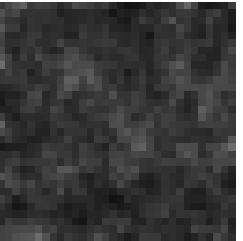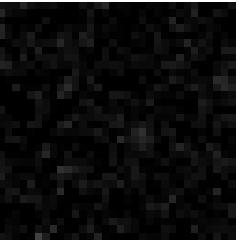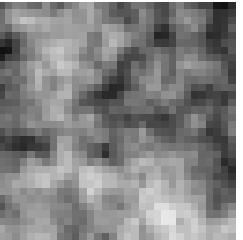
| Field	CSV	Stats	Preview
resources	evo_turbo_step000800_resources.csv	min=0.0020 max=1.0000 mean=0.2945 stddev=0.1560 nonzero_ratio=1.0000 p95=0.5600 entropy=3.6267 norm_entropy=0.8720	
phero_food	evo_turbo_step000800_phero_food.csv	min=0.0000 max=0.1940 mean=0.0465 stddev=0.0165 nonzero_ratio=0.9999 p95=0.0760 entropy=3.0444 norm_entropy=0.7320	
phero_danger	evo_turbo_step000800_phero_danger.csv	min=0.0000 max=0.0730 mean=0.0003 stddev=0.0018 nonzero_ratio=0.0959 p95=0.0010 entropy=0.3026 norm_entropy=0.0728	
molecules	evo_turbo_step000800_molecules.csv	min=0.0000 max=0.0360 mean=0.0011 stddev=0.0024 nonzero_ratio=0.3976 p95=0.0060 entropy=1.3161 norm_entropy=0.3165	

| | mycel | evo_turbo_step000800_mycel.csv | min=0.1090
max=0.3850
mean=0.2304
stddev=0.0467
nonzero_ratio=1.0000
p95=0.3140
entropy=3.7801
norm_entropy=0.9089 | |
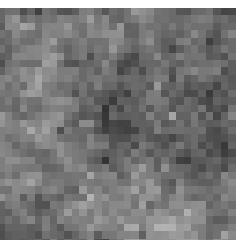
Step 1000
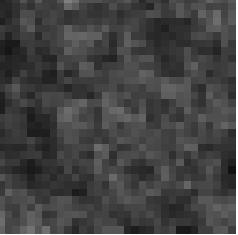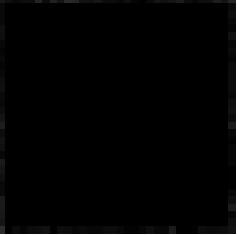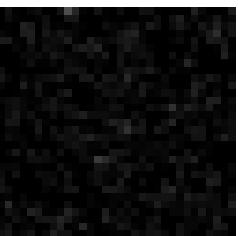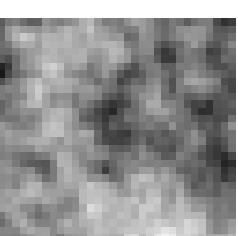
| Field	CSV	Stats	Preview
resources	evo_turbo_step001000_resources.csv	min=0.0020 max=1.0000 mean=0.3474 stddev=0.1717 nonzero_ratio=1.0000 p95=0.6390 entropy=3.7512 norm_entropy=0.9020	
phero_food	evo_turbo_step001000_phero_food.csv	min=0.0010 max=0.1630 mean=0.0468 stddev=0.0173 nonzero_ratio=1.0000 p95=0.0780 entropy=3.2660 norm_entropy=0.7853	
phero_danger	evo_turbo_step001000_phero_danger.csv	min=0.0000 max=0.0390 mean=0.0003 stddev=0.0015 nonzero_ratio=0.0913 p95=0.0010 entropy=0.4590 norm_entropy=0.1104	
molecules	evo_turbo_step001000_molecules.csv	min=0.0000 max=0.0250 mean=0.0011 stddev=0.0024 nonzero_ratio=0.3967 p95=0.0060 entropy=1.3179 norm_entropy=0.3169	
mycel	evo_turbo_step001000_mycel.csv	min=0.1500 max=0.4760 mean=0.3089 stddev=0.0515 nonzero_ratio=1.0000 p95=0.3940 entropy=3.7269 norm_entropy=0.8961	

Step 1200
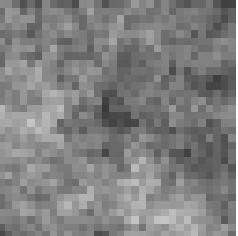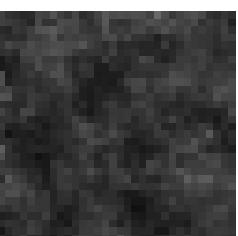
Field	CSV	Stats	Preview
resources	evo_turbo_step001200_resources.csv	min=0.0020 max=1.0000 mean=0.3990 stddev=0.1867 nonzero_ratio=1.0000 p95=0.7200 entropy=3.8447 norm_entropy=0.9244	
phero_food	evo_turbo_step001200_phero_food.csv	min=0.0000 max=0.2290 mean=0.0469 stddev=0.0168 nonzero_ratio=0.9999 p95=0.0780 entropy=2.8794 norm_entropy=0.6924	
phero_danger	evo_turbo_step001200_phero_danger.csv	min=0.0000 max=0.0410 mean=0.0003 stddev=0.0015 nonzero_ratio=0.0857 p95=0.0010 entropy=0.4375 norm_entropy=0.1052	
molecules	evo_turbo_step001200_molecules.csv	min=0.0000 max=0.0320 mean=0.0011 stddev=0.0024 nonzero_ratio=0.4000 p95=0.0060 entropy=1.3228 norm_entropy=0.3181	
mycel	evo_turbo_step001200_mycel.csv	min=0.2230 max=0.5300 mean=0.3756 stddev=0.0507 nonzero_ratio=1.0000 p95=0.4570 entropy=3.7614 norm_entropy=0.9044	
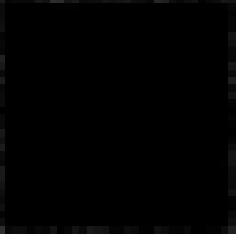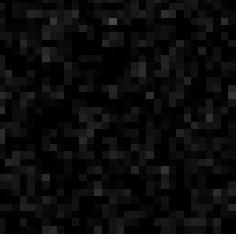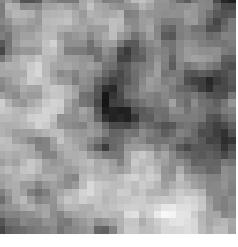
Step 1400

Field	CSV	Stats	Preview
resources	evo_turbo_step001400_resources.csv	min=0.0020 max=1.0000 mean=0.4497 stddev=0.2005 nonzero_ratio=1.0000 p95=0.7970 entropy=3.9228 norm_entropy=0.9432	
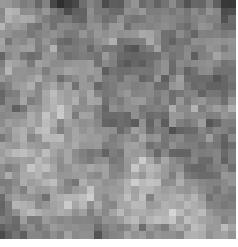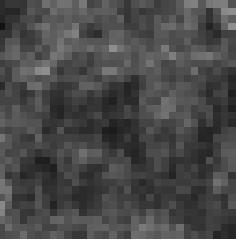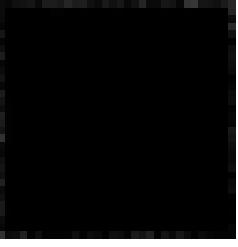
| phero_food	evo_turbo_step001400_phero_food.csv	min=0.0000 max=0.1870 mean=0.0470 stddev=0.0168 nonzero_ratio=0.9995 p95=0.0770 entropy=3.1094 norm_entropy=0.7476	
phero_danger	evo_turbo_step001400_phero_danger.csv	min=0.0000 max=0.0460 mean=0.0003 stddev=0.0016 nonzero_ratio=0.0934 p95=0.0010 entropy=0.4751 norm_entropy=0.1142	
molecules	evo_turbo_step001400_molecules.csv	min=0.0000 max=0.0320 mean=0.0011 stddev=0.0024 nonzero_ratio=0.4020 p95=0.0060 entropy=1.3262 norm_entropy=0.3189	
mycel	evo_turbo_step001400_mycel.csv	min=0.2560 max=0.5810 mean=0.4310 stddev=0.0504 nonzero_ratio=1.0000 p95=0.5090 entropy=3.6990 norm_entropy=0.8894	
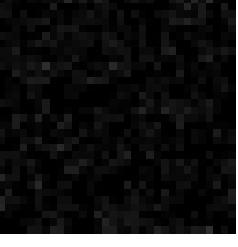
Step 1600

| Field	CSV	Stats	Preview
resources	evo_turbo_step001600_resources.csv	min=0.0020 max=1.0000 mean=0.4992 stddev=0.2142 nonzero_ratio=1.0000 p95=0.8730 entropy=3.9790 norm_entropy=0.9567	
phero_food	evo_turbo_step001600_phero_food.csv	min=0.0010 max=0.2260 mean=0.0463 stddev=0.0166 nonzero_ratio=1.0000 p95=0.0760 entropy=2.9056 norm_entropy=0.6986	

Field	CSV	Stats	Preview
phero_danger	evo_turbo_step001600_phero_danger.csv	min=0.0000 max=0.0420 mean=0.0003 stddev=0.0016 nonzero_ratio=0.0876 p95=0.0010 entropy=0.4475 norm_entropy=0.1076	
molecules	evo_turbo_step001600_molecules.csv	min=0.0000 max=0.0270 mean=0.0011 stddev=0.0024 nonzero_ratio=0.4029 p95=0.0060 entropy=1.3237 norm_entropy=0.3183	
mycel	evo_turbo_step001600_mycel.csv	min=0.2960 max=0.6130 mean=0.4761 stddev=0.0517 nonzero_ratio=1.0000 p95=0.5530 entropy=3.7419 norm_entropy=0.8997	

Step 1800

Field	CSV	Stats	Preview
resources	evo_turbo_step001800_resources.csv	min=0.0020 max=1.0000 mean=0.5473 stddev=0.2218 nonzero_ratio=1.0000 p95=0.9280 entropy=4.0009 norm_entropy=0.9620	
phero_food	evo_turbo_step001800_phero_food.csv	min=0.0000 max=0.1570 mean=0.0445 stddev=0.0163 nonzero_ratio=0.9999 p95=0.0740 entropy=3.2274 norm_entropy=0.7760	
phero_danger	evo_turbo_step001800_phero_danger.csv	min=0.0000 max=0.0350 mean=0.0003 stddev=0.0015 nonzero_ratio=0.0898 p95=0.0010 entropy=0.4545 norm_entropy=0.1093	

molecules	evo_turbo_step001800_molecules.csv	min=0.0000 max=0.0340 mean=0.0011 stddev=0.0024 nonzero_ratio=0.4019 p95=0.0060 entropy=1.3274 norm_entropy=0.3192	
mycel	evo_turbo_step001800_mycel.csv	min=0.2960 max=0.6440 mean=0.5126 stddev=0.0504 nonzero_ratio=1.0000 p95=0.5910 entropy=3.6189 norm_entropy=0.8702	