

Precipitation Fact Sheet

Murchison Falls National Park

- The area around Murchison Falls National Park (MFNP) has two rainy seasons. These seasons are not as pronounced as they are at more equatorial regions in Uganda.
- The winter dry season is significantly longer and more dry than the summer dry season.
- All six weather stations at MFNP had complete datasets for the period of 1940-1975. There do not appear to be any significant trends over time in annual precipitation at MFNP during this period of time (Figure 2).

Table 1a. Precipitation estimates and timing of the first rainy season, from harmonic analysis of monthly data.

Station	Period	Prec. (mm)	Onset 1 (days)	Cessation 1 (days)
Butiaba	1904-1979	733.7 ± 152	3-Mar ± 27	19-May ± 44
Bulisa	1940-1985	1087.0 ± 252	7-Mar ± 32	24-May ± 42
Bwijanga	1940-1985	1295.3 ± 175	6-Mar ± 33	15-May ± 39
Ihungu	1940-1984	1454.6 ± 269	1-Mar ± 21	14-May ± 41
Masindi	1940-2010	1320.4 ± 163	30-Mar ± 27	5-May ± 29
Gulu	1911-2011	1489.9 ± 219	13-Mar ± 30	8-Jun ± 54

Table 1b. Precipitation estimates and timing of the second rainy season, from harmonic analysis of monthly data.

Station	Onset 2 (days)	Cessation 2 (days)
Butiaba	4-Aug ± 40	19-Oct ± 34
Bulisa	25-Jul ± 38	22-Oct ± 30
Bwijanga	8-Aug ± 35	28-Oct ± 26
Ihungu	6-Aug ± 36	1-Nov ± 23
Masindi	28-Jul ± 41	29-Oct ± 25
Gulu	28-Jul ± 50	25-Oct ± 22

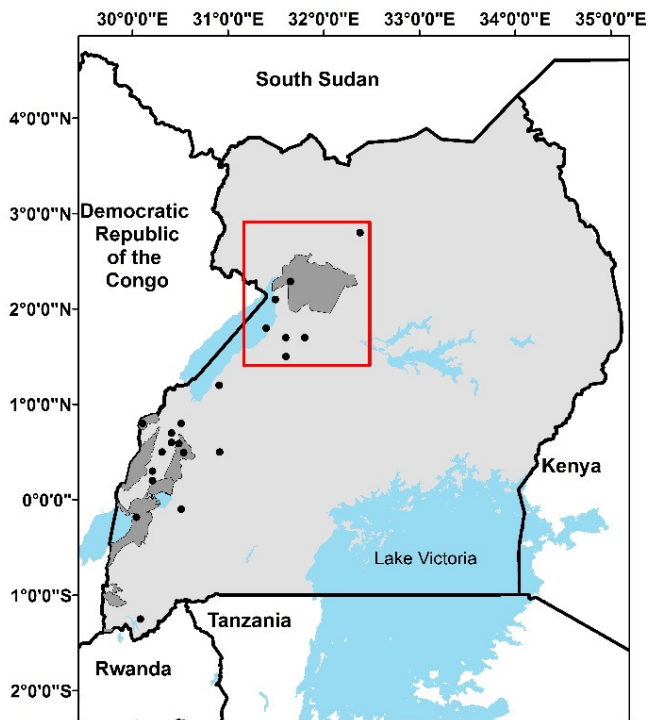


Figure 1. Map of Uganda with rainfall stations (dots) and the area around Murchison Falls highlighted by the red box.

Monthly rainfall records obtained from the following stations:

- Bwijanga (31.5°E, 1.5°N, 1940-1985)
- Masindi (31.7°E, 1.7°N, 1940-2010)
- Ihungu (31.5°E, 1.7°N, 1940-1984)
- Butiaba (31.3°E, 1.8°N, 1904-1979)
- Bulisa (31.4°E, 2.1°N, 1940-1985)
- Gulu (32.3°E, 2.8°N, 1911-1992)

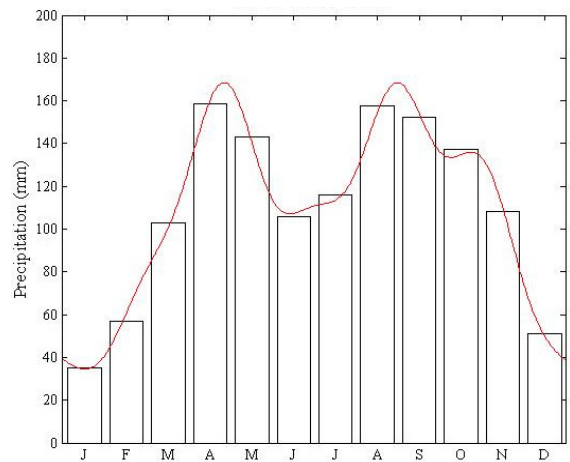


Figure 2a. Mean monthly precipitation at the average of the six MFNP stations.

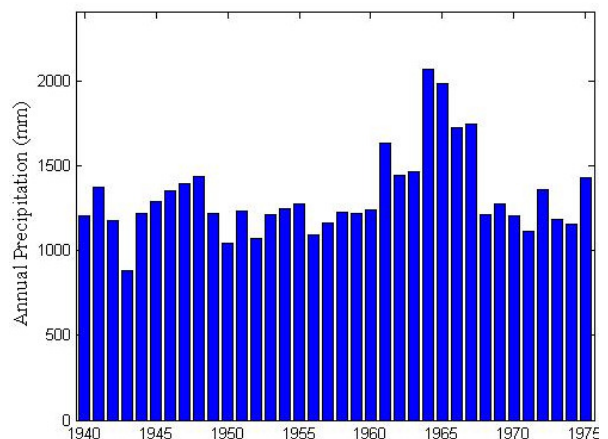


Figure 2b. Annual precipitation over time at the average of the six MFNP stations.

Precipitation fact sheet: Murchison Falls National Park

There is high variability in mean annual rainfall between station datasets. Longer periods of records are necessary to determine if this variability is due to geographic factors or due to the fact that the stations' dataset cover different periods of time. More complete rainfall records for recent times are necessary for determining if precipitation patterns are currently changing.

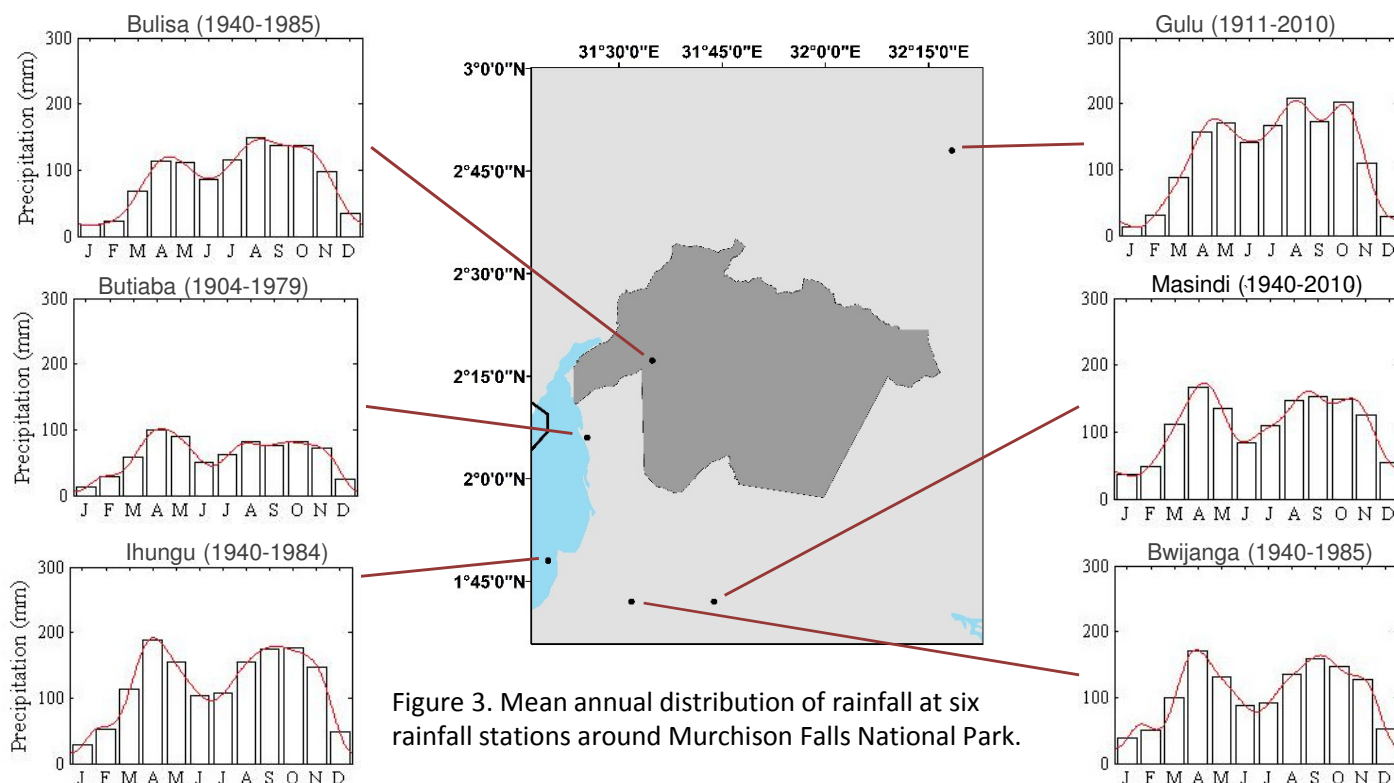


Figure 3. Mean annual distribution of rainfall at six rainfall stations around Murchison Falls National Park.

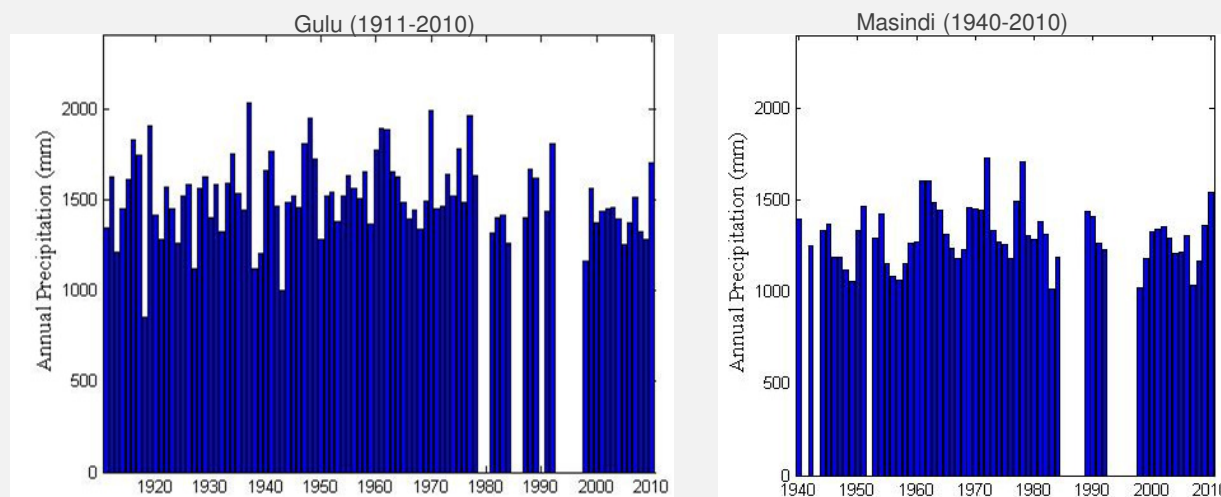


Figure 4. The weather stations at Gulu and Masindi had a longer periods of record than the other stations at Murchison Falls. No significant trends in annual precipitation or the timing of the rainy seasons were detected at Gulu or Masindi.

PECAR: People, Environment, and Climate in the Albertine Rift

Principal Investigators: Joel Hartter, Jeremy Diem, Sadie Ryan, Colin Chapman.

Acknowledgements: This precipitation data was recorded by countless people in Uganda, and was collected and organized by Dr. Joel Hartter of the University of New Hampshire and Dr. Jeremy Diem of Georgia State University.

Funding: National Science Foundation Coupled Natural Human Systems grant, National Geographic Society Research and Exploration Grant, Canada Research Chair, University of New Hampshire.

