

**ADVANCED
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Supporting Information

for *Adv. Sustainable Syst.*, DOI: 10.1002/adsu.202000040

Harps Enable Water Harvesting under Light Fog Conditions

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Supporting Information

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Conditions

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1 Supporting Figures



Figure S1: Photograph of the linear needle features of a redwood, which facilitates efficient fog drip. This image was used with permission (CC BY 2.0) from username “Pussreboots” from Flickr.

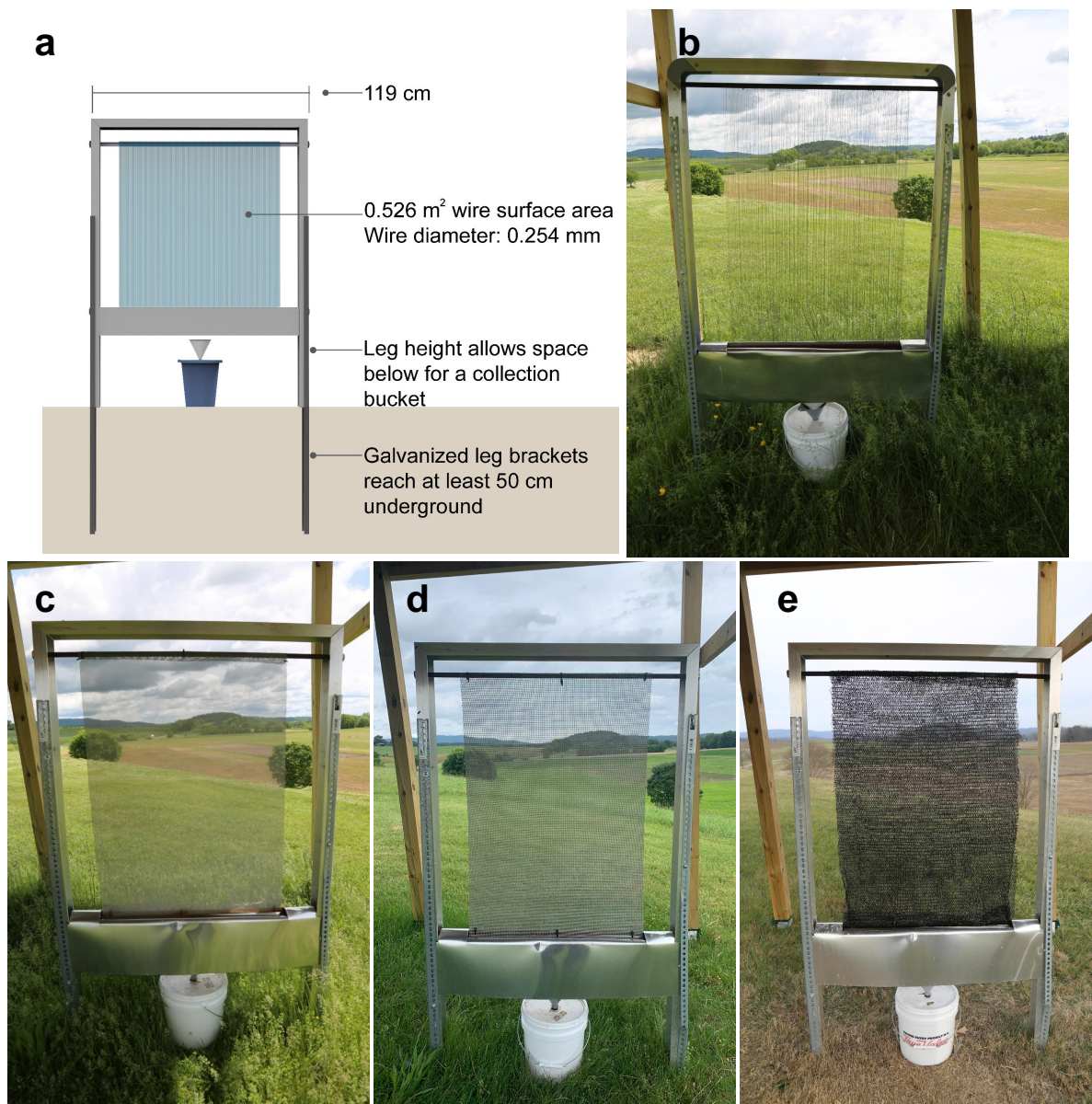


Figure S2: a) Schematic of the dimensions of an installed fog harvester. b–e) Photographs of the Fog Harp, fine square mesh (Mesh 1), coarse square mesh (Mesh 2), and Raschel mesh (Mesh 3), respectively.

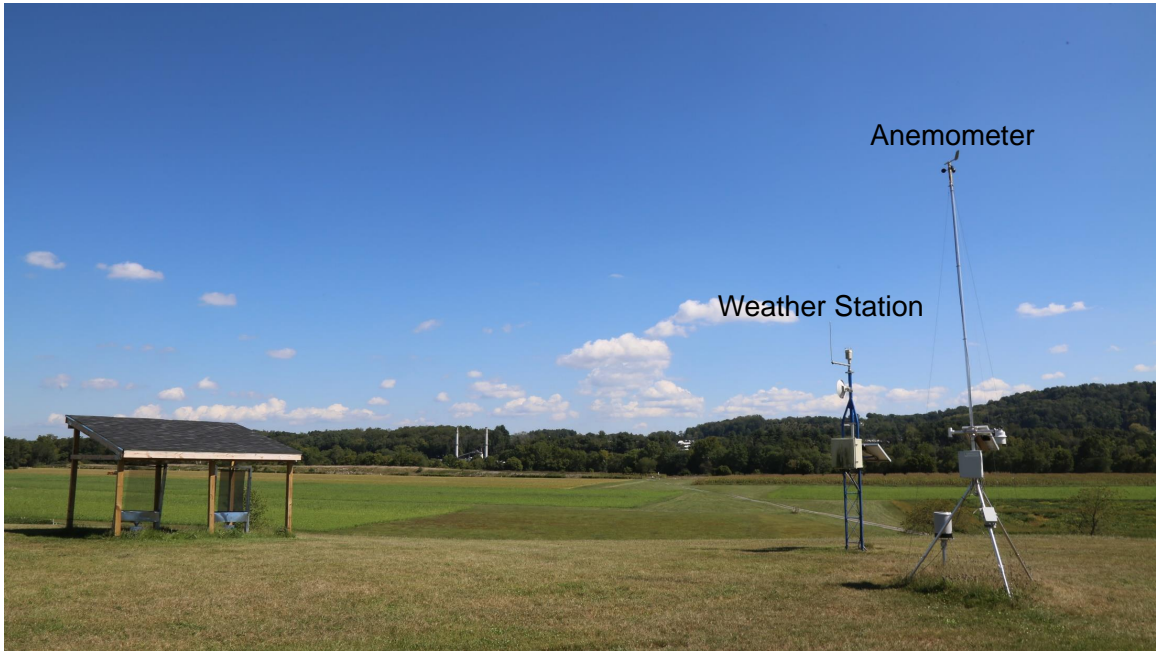


Figure S3: Photograph showing the 14 m proximity of the fog harvesters to the weather station and anemometer. This station provided continuous digital measurements of the wind speed, wind direction, relative humidity, and air temperature.

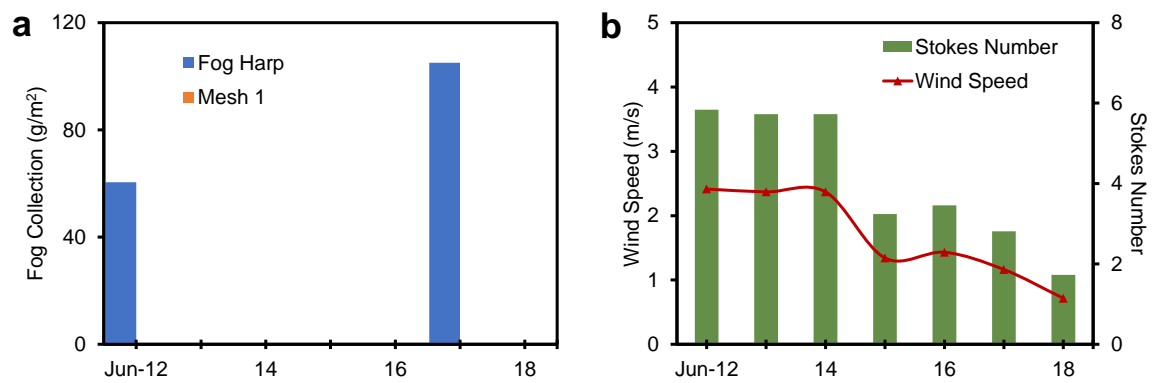


Figure S4: a) The daily amounts of fog collected by the Fog Harp and Mesh 1, for the week of June 12th–18th. Mesh 1 did not harvest any water during this period. b) Average wind speed and corresponding Stokes number for this weeklong period.

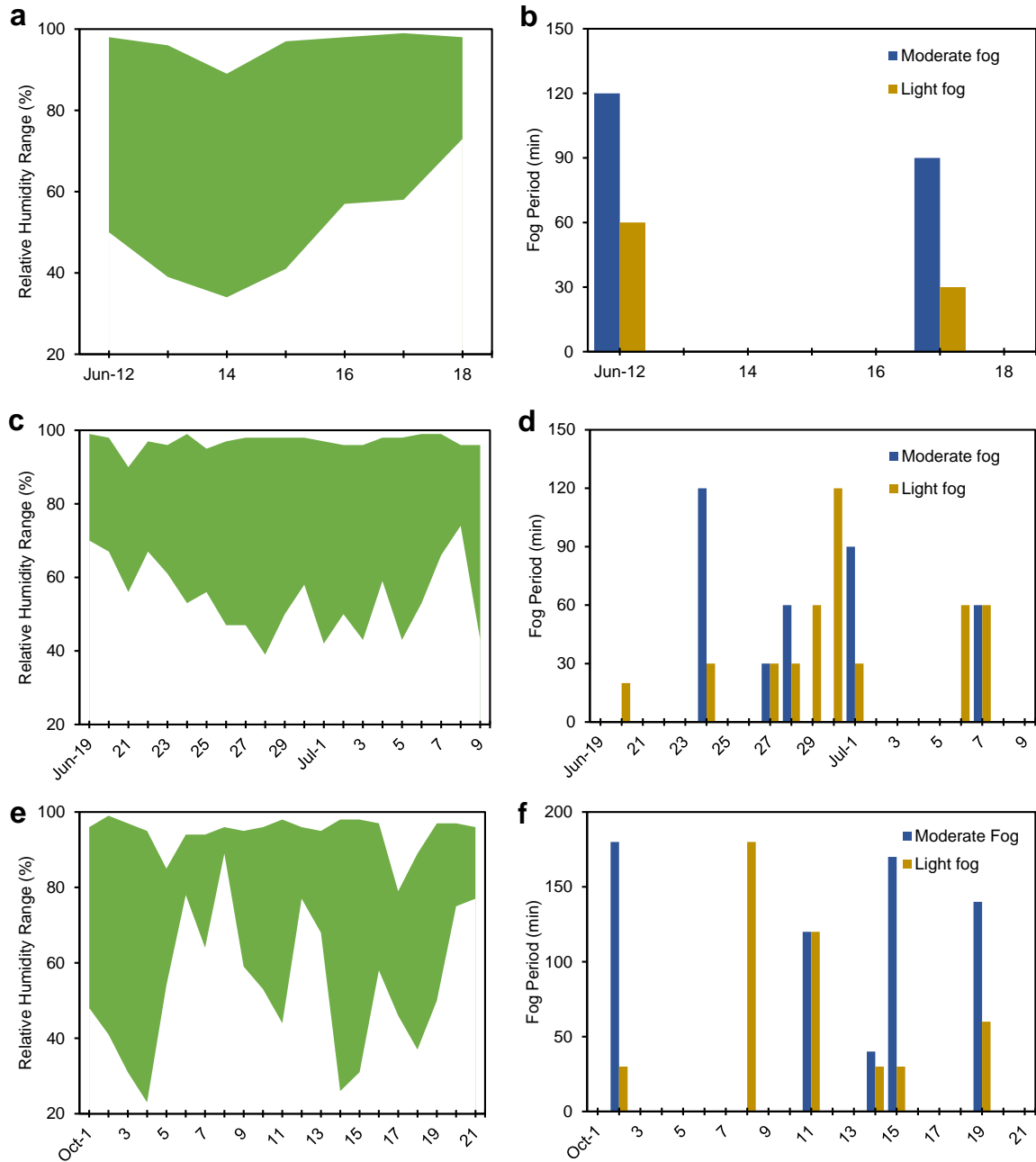


Figure S5: a) The daily range in relative humidity for the tests comparing the Fog Harp to Mesh 1 (see Fig. S4). b) The intensity and duration of fog for each day of the same week-long period, based off the video streams of the webcam installed at Kentland Farm. A visibility of < 100 m is defined as moderate fog and a visibility of > 100 m is defined as light fog. Only daytime fog was able to be measured. c,d) Measurements of the relative humidity and fog conditions, this time for the three-week period where the Fog Harp was compared to Mesh 2. e,f) Measurements of humidity and fog for the additional three-week period where the Fog Harp and Mesh 3 were tested side by side.

Table S1: Comparison of water amounts collected by the Fog Harp and the coarse square mesh (Mesh 2), with measurements taken after week-long intervals.

Dates	Fog harp (g/m ²)	Mesh 2 (g/m ²)	Multiplier
08/06/2019-08/12/2019	167.13	0	∞
08/13/2019-08/19/2019	410.30	185.13	2.2
08/20/2019-08/27/2019	758.10	107.93	7.0
08/28/2019-09/03/2019	389.98	0	∞
09/11/2019-09/17/2019	702.43	154.96	4.5

Table S2: Comparison of water amounts collected by the Fog Harp and the Raschel mesh (Mesh 3), with measurements taken after week-long intervals.

Dates	Fog harp (g/m ²)	Mesh 3 (g/m ²)	Multiplier
08/06/2019-08/12/2019	744.52	429.90	1.73
08/13/2019-08/19/2019	152.76	0	∞
08/20/2019-08/27/2019	0	0	-
08/28/2019-09/03/2019	0	0	-
09/11/2019-09/17/2019	0	0	-

2 Supporting Videos

Movie S1

Real-time playback of fog droplets sliding down the vertical wires of the Fog Harp during a foggy day at Kentland Farm.

Movie S2

Real-time playback of fog droplets pinned on the fine square mesh harvester (Mesh 1) on the same foggy day as Movie S1. A small number of the mesh holes are clogged with water (green color), while the large majority of holes remain open to wind flow (gray color).