Proper Shuttlecock Moisture Levels

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Background

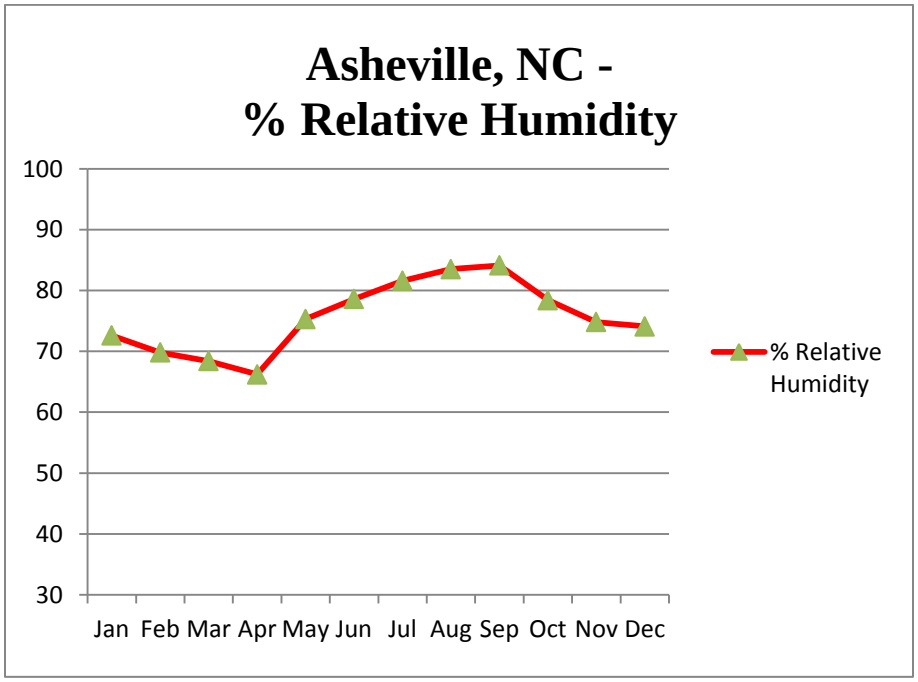
Dry shuttlecocks lack resilience, feathers easily break, and they do not fly as far or as fast as intended. Accordingly, shuttle moisture levels must be monitored to ensure durability and consistency of flight.

Shuttle moisture levels are primarily a function of the **ambient relative humidity conditions** at which the shuttles are stored and used.

Consequently, **location** plays a large part in overall shuttle moisture levels. Shuttles stored and used in a tropical setting will have higher moisture levels than shuttles stored and used in a desert environment.

Likewise, **seasonal variation** also factors into overall shuttle moisture levels. Shuttles stored and used in summer (in the northern hemisphere) will have higher moisture levels than shuttles stored and used in winter (in the northern hemisphere).

Steaming is one of the most effective methods for increasing shuttle moisture levels. Accounting for both location and seasonal variation allows one to have a general idea of how much steaming is necessary to ensure the shuttles are properly hydrated for durable and consistent flight.



Steaming Materials & Procedure – Asheville, NC

Materials

1) Shuttles – 12 per tube tube with both end caps present
2) Small pot – 1 qt capacity or so
3) Water – clean
4) Continuous heat source – stove, etc.
5) Timer with second feature – a built-in microwave timer works great

Procedure

1) Fill the pot roughly 75% full with water and bring to a semi-vigorous boil. A lid with a steam release hole can be left on the pot, whereas all other lid styles must be removed.

2) Take off both end caps on each tube to be steamed.
3) Start the timer for 10 minutes.
4) Note start time, then center the **exit side** (cork side) of the tube **3-4”** vertically over the steam release hole or **3-4”** vertically over the center of the open pot.

5) **Feb – Apr:** Steam for **50** seconds, then flip the tube over to the **entry side** (feather side) and steam for **50** more seconds.
6) **Oct – Jan / May – Jun:** Same procedure as step 5, but use **40** seconds.
7) **Jul – Sep:** Same procedure as step 5, but use **30** seconds.
8) Once both sides have been steamed, **promptly** place both end caps back on the tube.
9) Repeat steps 4-8 as needed until all tubes have been steamed.
10) **Label** each tube with the current date for future reference.

FAQ

Q: How soon can the shuttles be used after being steamed?

A: A **minimum of 24 hours** is required for the shuttles to take up the introduced moisture and reach equilibrium with the moisture-rich tube environment.

Q: How often must the shuttles be steamed to be kept properly hydrated?

A: Most tubes are foil-lined and do a fairly good job of insulating the shuttles from ambient relative humidity levels. Thus, re-steaming is primarily a function of when the shuttles were last steamed and how often the tube is left open. In general, if the tube is only briefly opened to remove shuttles for play, they should **typically last 2-3 weeks** before needing to be re-steamed.

Durability and consistency will also give an indication as whether the shuttles need to be re-steamed. Are they not lasting as long as they initially were after being steamed? Do they seem to be lacking the desired distance and/or velocity? If the answer to either question is “yes”, then it’s likely the shuttles need to be re-steamed.

Q: Do new, unopened shuttles need to be steamed before use?

A: Yes, new, unopened shuttles were typically packaged months ago and are exceedingly dry.

Q: Can the shuttles be over-steamed?

A: Yes, steaming for too long introduces too much moisture into the tube. This has detrimental effects such as causing the feathers and cork to become waterlogged. Too much moisture also encourages the growth of mold and mildew.

Q: How long should a tube containing less than 12 shuttles be steamed?

A: Adjust the required time based on the relative proportion of shuttles in the tube. For example, for a tube with only 6 shuttles in Feb, steam each side for half (6/12 = 50%) the normal time of 50 seconds, or 25 seconds.