

Do Mug Fairies Exist? An experiment in self-cleaning crockery.

Do **Mug Fairies** Exist? An experiment in self-cleaning crockery.

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Abstract

The author set out to prove that if coffee or tea mugs are left in an office for long enough they will clean themselves. Previous research in this area suggest that this hypothesis is true, as the author has very infrequently had to resort to cleaning the mugs himself.

Methods

Cups of tea and coffee were made for visitors to the offices of CrossRef in Oxford. Some had added milk. After the visitors left the office, the mugs were left on the counter in the vicinity of the kettle and microwave for a number of days. Room temperature was ambient throughout, with the exception of a short period in August 2013 when the office was exceptionally hot for several hours.

Discussion

The experiment was repeated on regular occasions throughout an 18 month period. At times the mugs disappeared the same day and reappeared clean on the shelf (see Fig.1). The author was not able to determine exactly how this happened, although one possible theory is that the firm contracted to clean the office every Wednesday evening instructed its staff to clean the mugs.



Fig. 1. Clean mugs on the shelf.

At other times the mugs were observed to go through several stages of aging, producing mold growth over periods ranging from days to weeks (see Fig. 2). Consistent with previous research in this area, the mugs with added milk

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started to mold first.

The mugs were moved only minimally during this period, this allowing the mold to settle and flourish (Fig. 3), eventually developing penicillin-like properties in one case (Fig. 4). Throughout the experiment the author was careful not to approach the mugs and risk their accidental removal to the kitchen where the risk of contamination with washing up liquid would have been considerable.



Fig. 2. Specimen A, 3 days elapsed.



Fig. 3. Specimen A, 14 days elapsed.

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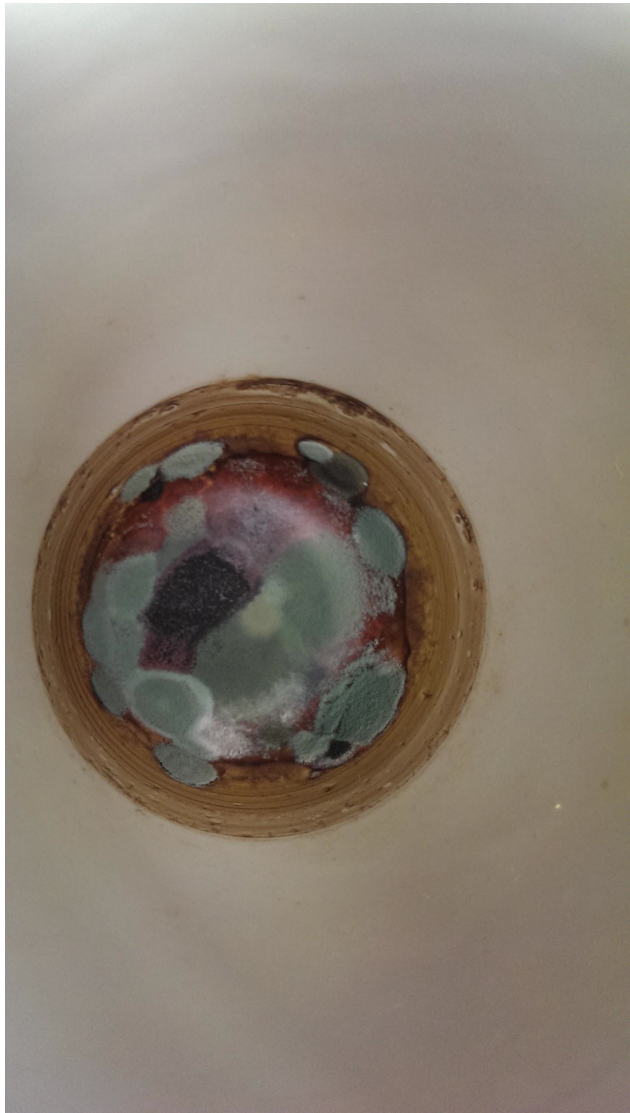


Fig. 4. Specimen A, 28 days elapsed.

Conclusion

Used coffee and tea mugs do clean themselves, but there appears to be no consistent time frame for this activity. Further research is needed.

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