Using publicly available climate data to improve hindcasts of **Gopher Tortoise nest temperatures** for data imputation

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BACKGROUND

- **Gopher Tortoises provide critical habitat** for up to 360 different species
- **Nest temperature** is an interesting predictor of **hatching success and sex ratio in gopher tortoises**
- iButton data loggers can be used to measure **hourly nest temperatures during egg incubation**
- There is an **information gap** between the time of lay and the time of nest discovery

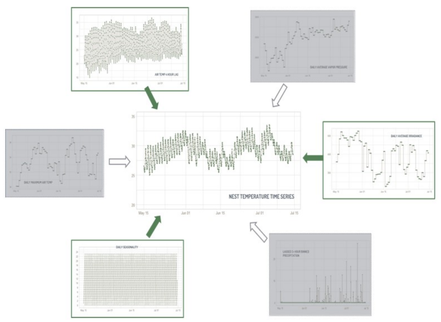
QUESTION

Can **publicly available climate data** be used to enrich hindcasts of **tortoise nest temperatures**?

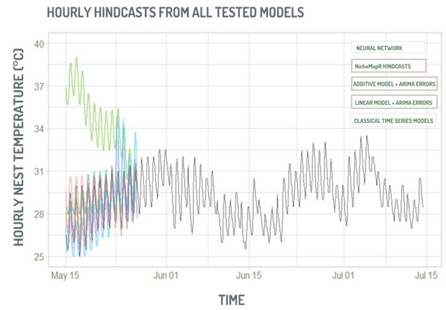
METHODS

NEST DISCOVERY AND SENSOR PLACEMENT

VARIABLE SELECTION

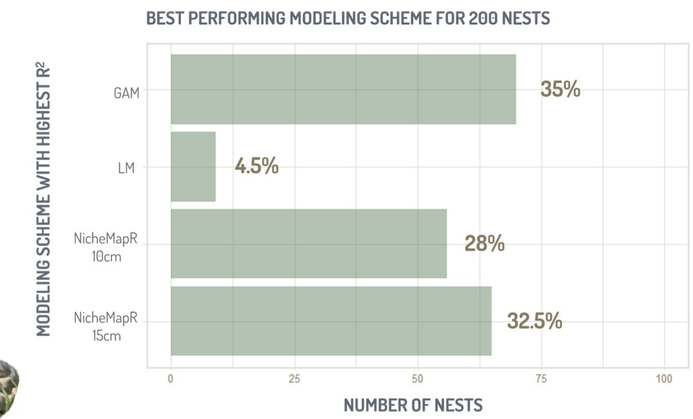


MODEL FITTING AND TESTING

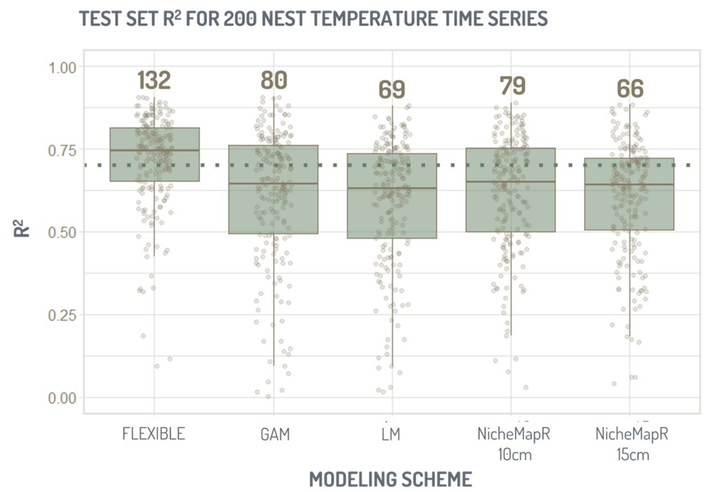


RESULTS AND DISCUSSION

THE 'BEST' MODELING APPROACH DIFFERED AMONG NESTS



FLEXIBLE MODELING USES THE BEST SCHEME FOR EACH NEST



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