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Pest outbreaks detectability in non-intervention forest using consumer-grade camera within the aerial survey

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

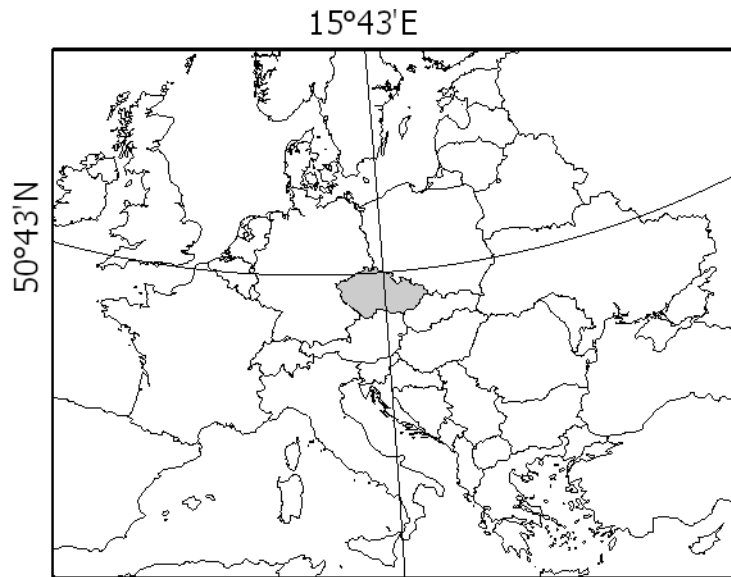




<https://domaci.ihned.cz/>

Study site

The Krkonoše Mountains National Park



<http://www.scheufler.cz>



0 40 80 Meters





Study site

1st zone, non-intervention, no forest management

UNESCO Biosphere Reserve site since 1992

Spruce forest *Picea abies*, further by mountain-ash *Sorbus aucuparia*, common beech *Fagus sylvatica*, and silver fir *Abies alba*

Field data collection

Unique time-series (four times a season)

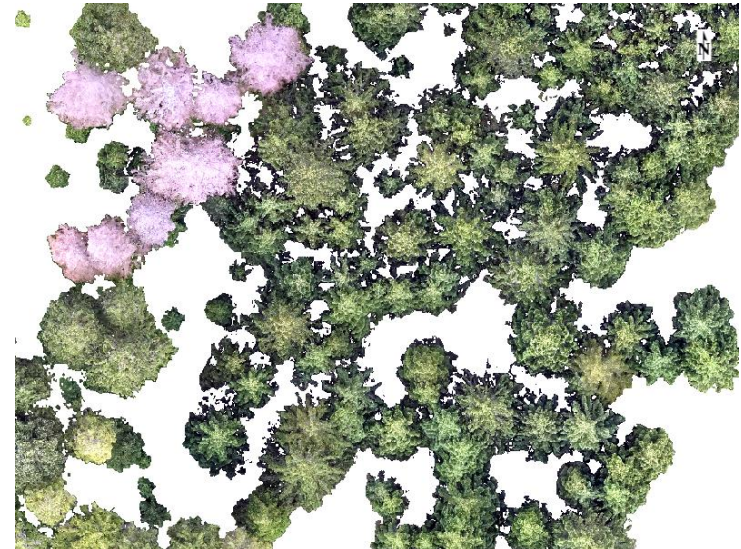
- Middle of June (before outbreak)
- Beginning of August (green-stage)
- End of August (yellow-stage)
- End of September (red-stage)

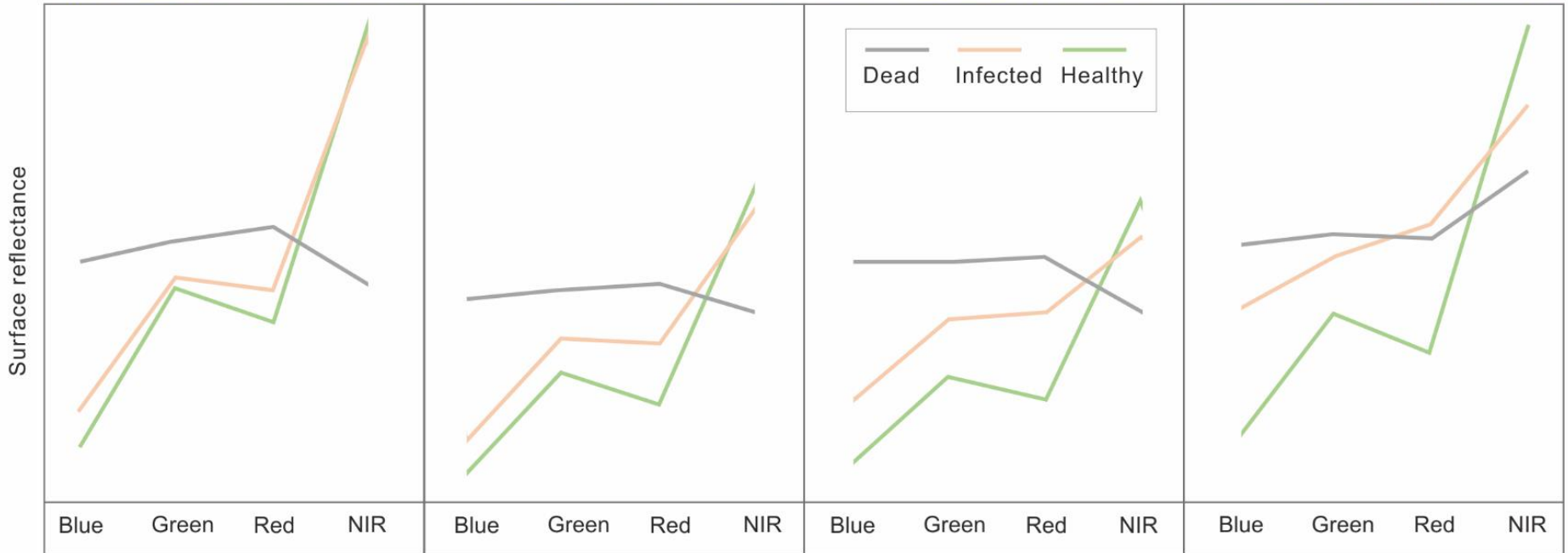
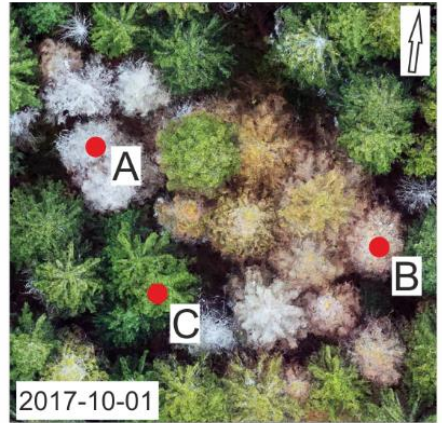
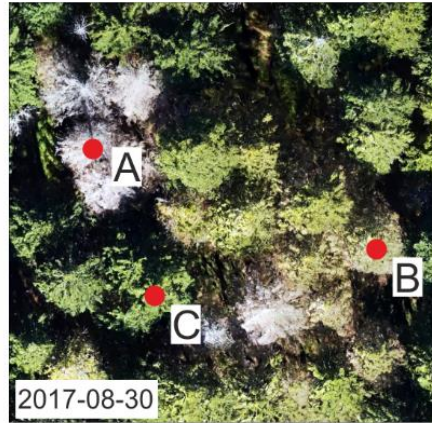
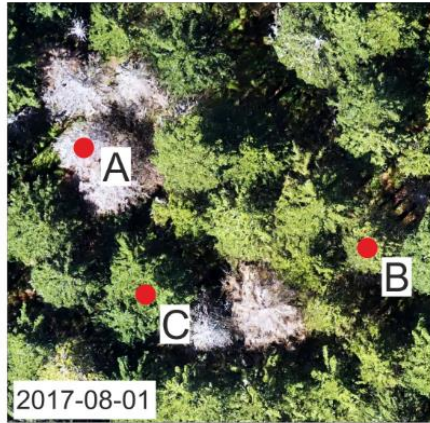
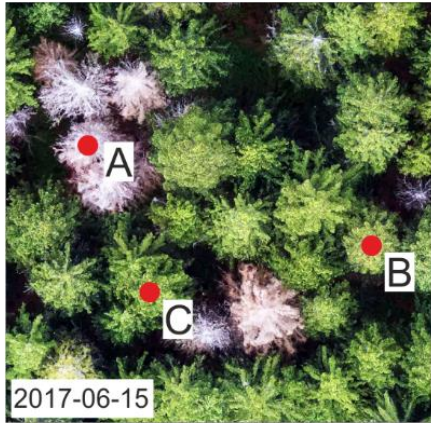
Data processing

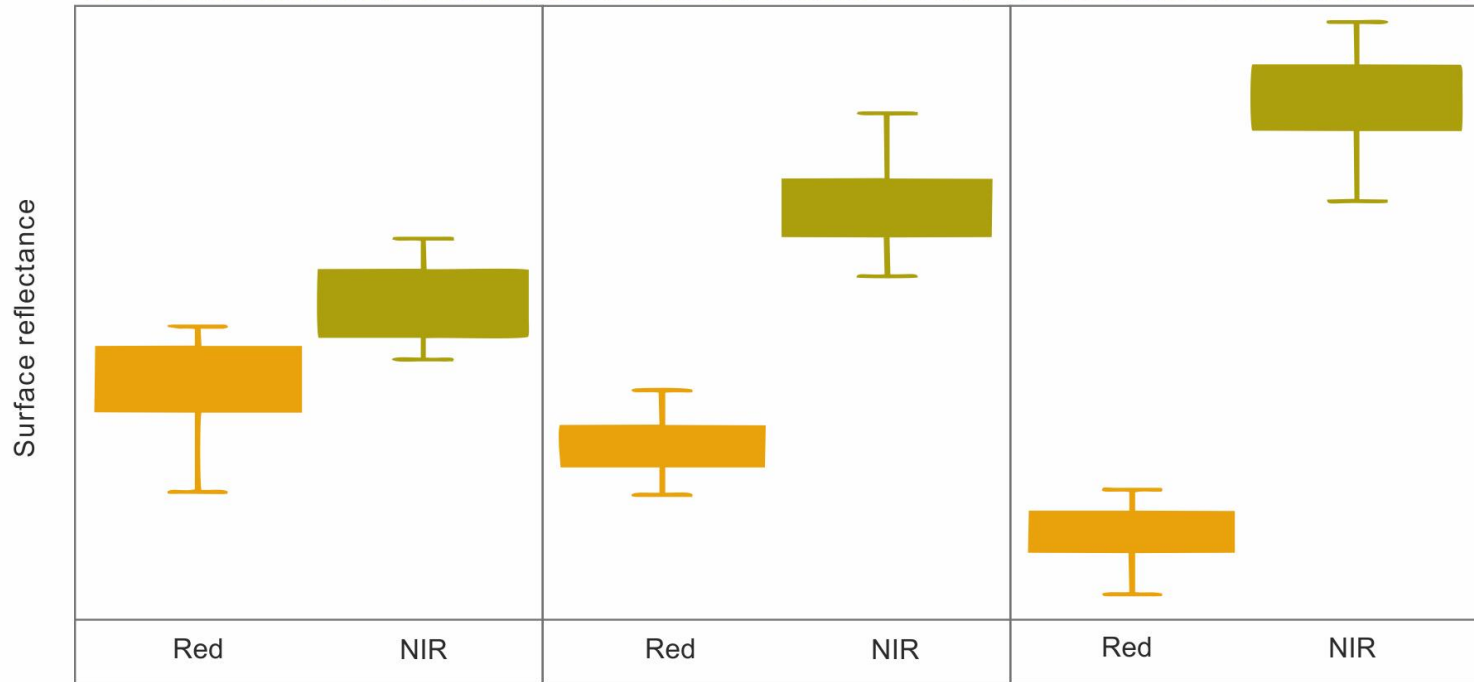
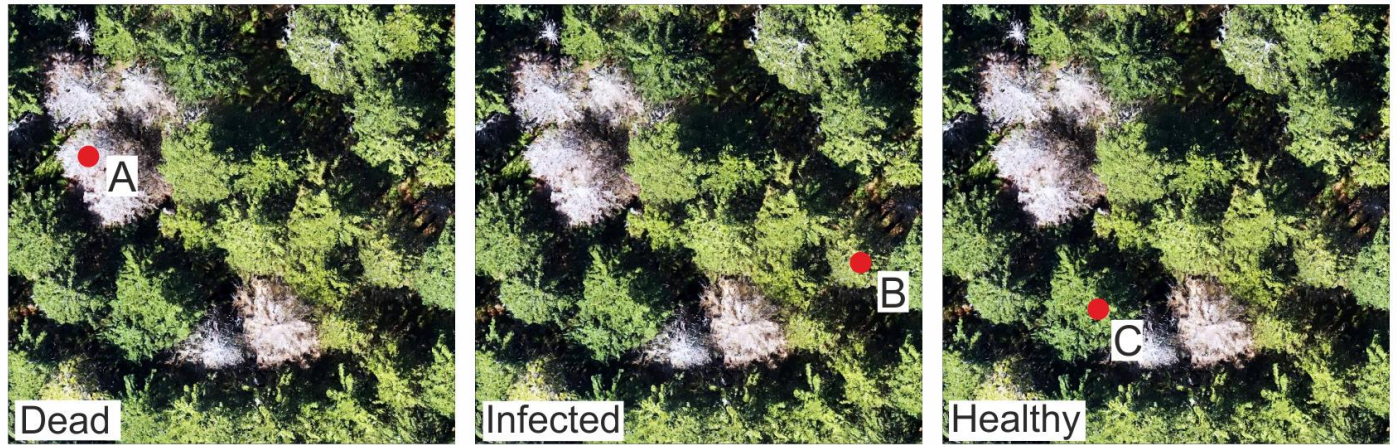
PhotoScan, ENVI

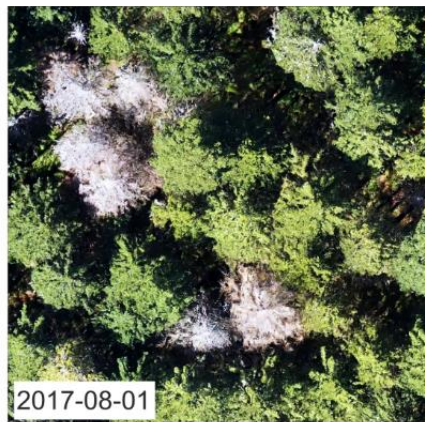
Tree crowns delineation

Shadows masking

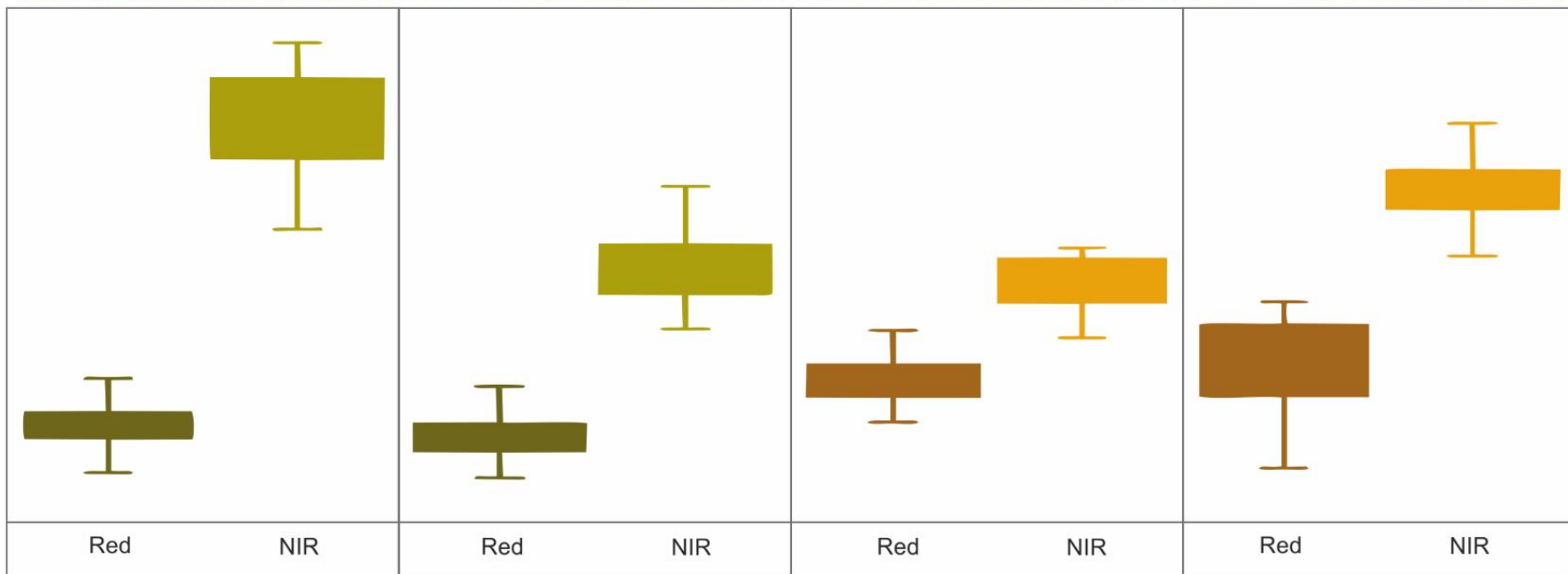








Surface reflectance



<http://fzp.czu.cz/SSEE>

<https://goo.gl/BD1A1d>



Thank you for attention and
follow the project!