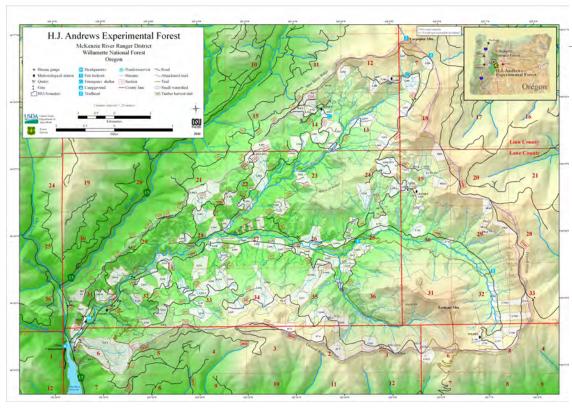
# HJ Andrews Experimental Forest LTER



Extra Extra!, Burning Site News: Late February 2019 disturbance event



# SNOWDOWN !!!!







# HJ Andrews Experimental Forest LTER

Topic/Example: The Ecology of Surprise

Burning Site News: Late February 2019 disturbance event

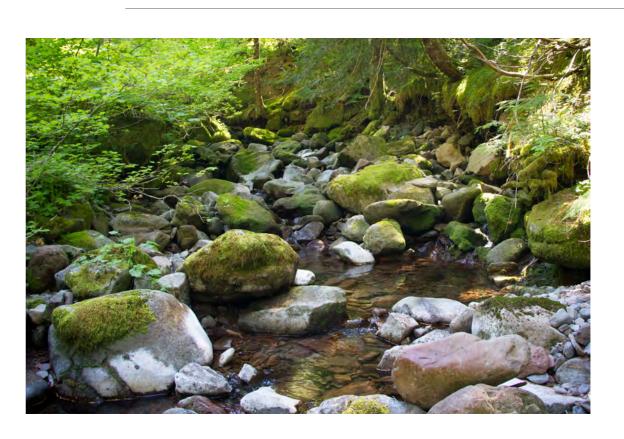
### 2 Types of Surprise

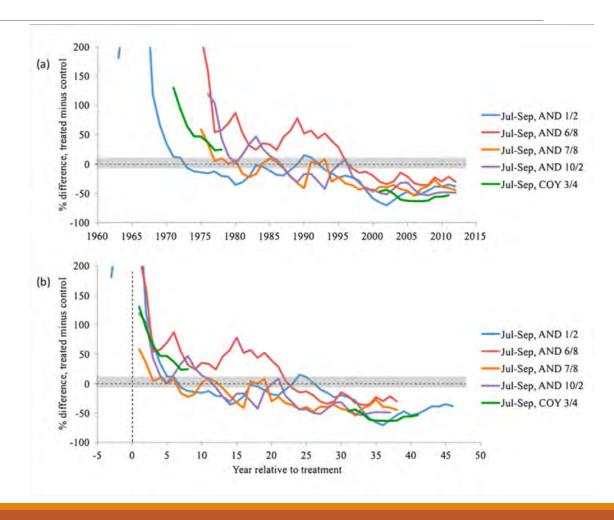
Type 1. Surprises or amazement about how our system works.

Type 2. We thought something was X and it turned out it was Y, that theory suggests one thing and over time we see another.

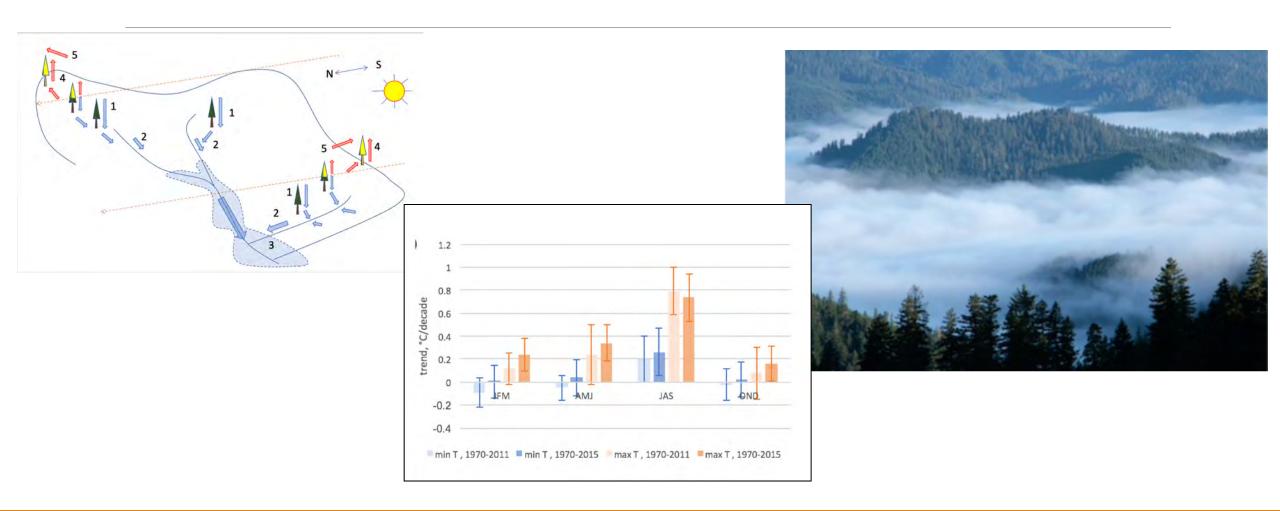
10 and 40 year surprises

# 10 year - legacy of human impact





# 10 year - a warming world



10 year - challenging dogma

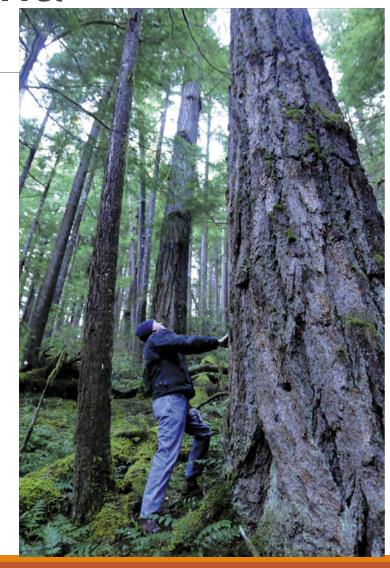
Journal of Vegetation Science 26 (2015) 722-732

#### Testing predictions of forest succession using longterm measurements: 100 yrs of observations in the Oregon Cascades

Mark E. Harmon & Robert J. Pabst

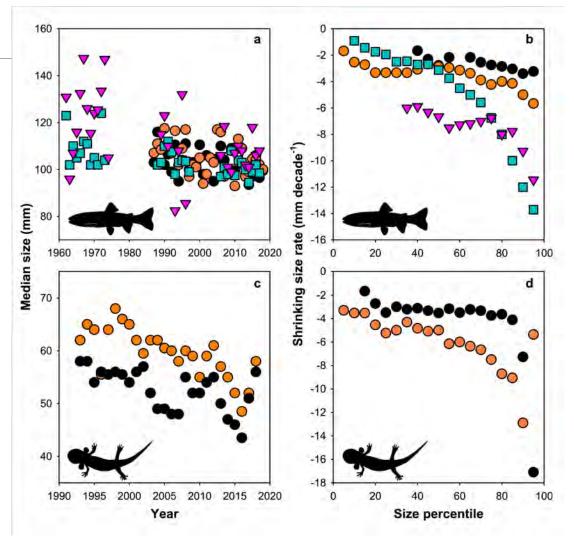
### Rate of tree carbon accumulation increases continuously with tree size

N. L. Stephenson<sup>1</sup>, A. J. Das<sup>1</sup>, R. Condit<sup>2</sup>, S. E. Russo<sup>3</sup>, P. J. Baker<sup>4</sup>, N. G. Beckman<sup>3</sup>†, D. A. Coomes<sup>5</sup>, E. R. Lines<sup>6</sup>, W. K. Morris<sup>7</sup>, N. Rüger<sup>2,8</sup>†, E. Álvarez<sup>9</sup>, C. Blundo<sup>10</sup>, S. Bunyavejchewin<sup>11</sup>, G. Chuyong<sup>12</sup>, S. J. Davies<sup>13</sup>, Á. Duque<sup>14</sup>, C. N. Ewango<sup>15</sup>, O. Flores<sup>16</sup>, J. F. Franklin<sup>17</sup>, H. R. Grau<sup>10</sup>, Z. Hao<sup>18</sup>, M. E. Harmon<sup>19</sup>, S. P. Hubbell<sup>2,20</sup>, D. Kenfack<sup>13</sup>, Y. Lin<sup>21</sup>, J.-R. Makana<sup>15</sup>, A. Malizia<sup>10</sup>, L. R. Malizia<sup>22</sup>, R. J. Pabst<sup>19</sup>, N. Pongpattananurak<sup>23</sup>, S.-H. Su<sup>24</sup>, I-F. Sun<sup>25</sup>, S. Tan<sup>26</sup>, D. Thomas<sup>27</sup>, P. J. van Mantgem<sup>28</sup>, X. Wang<sup>18</sup>, S. K. Wiser<sup>29</sup> & M. A. Zavala<sup>30</sup>

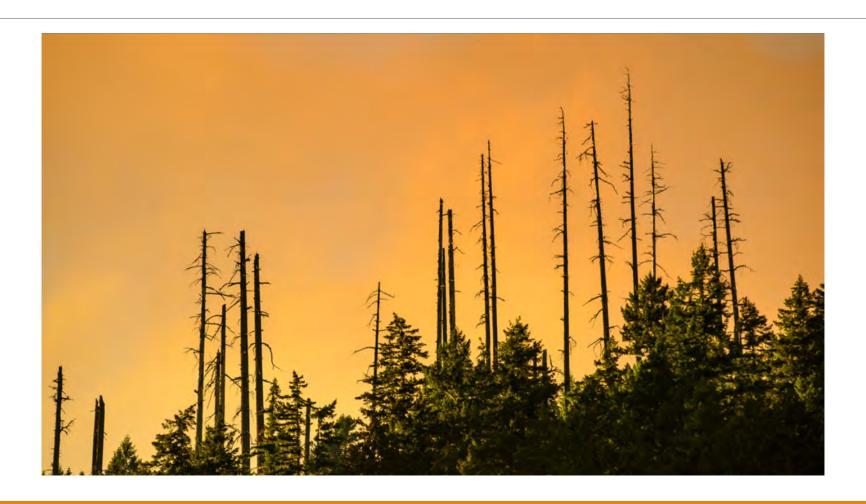


### 40 year - Response to disturbance





# 40 year - Fire regimes



### 40 year - Governance and influence





"[T]he extent and frequency of major 'surprises' in ecological systems argue for substantial humility about our predictive abilities."

- Dan Doak