



TEMPERATURE



ALL ORGANISM LIVE IN A THERMAL ENVIRONMENT.

PHOTOSYNTHESIS IS TEMPERATURE-SENSITIVE

PLANT HAVE METABOLIC ADAPTATIONS TO HEAT AND COLD

ADAPTATION TO HEAT

ADAPTATION TE COLD



ANIMALS MAINTAIN
TEMPERATURE DIFFERENTLY.

ANIMALS FALL INTO THREE
PHYSIOLOGICAL GROUPS :

- > HOMEOTHERMS
- > POIKILOOTHERMS
- > HETEROOTHERMS

POIKILOOTHERMS DEPEND ON
ENVIRONMENTAL TEMPERATURE



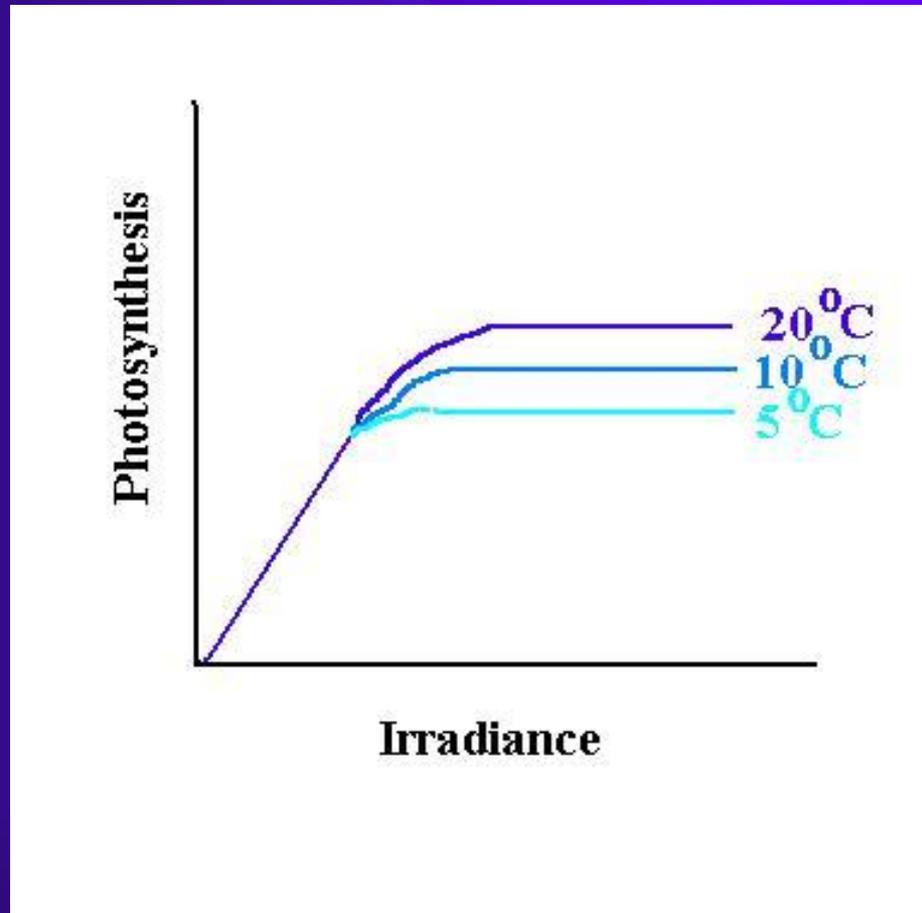
- ◆ HOMEOTHERMIC BIRDS AND MAMMALS MEET THE THERMAL CONSTRAINTS OF THE ENVIRONMENT BY BEING ENDOOTHERMIC.
- ◆ HAVE A HIGH METABOLIC RATE AND LOW THERMAL CONDUCTANCE



◆ HETEROOTHERMS MAY OR MAY NOT REGULATE BODY TEMPERATURE

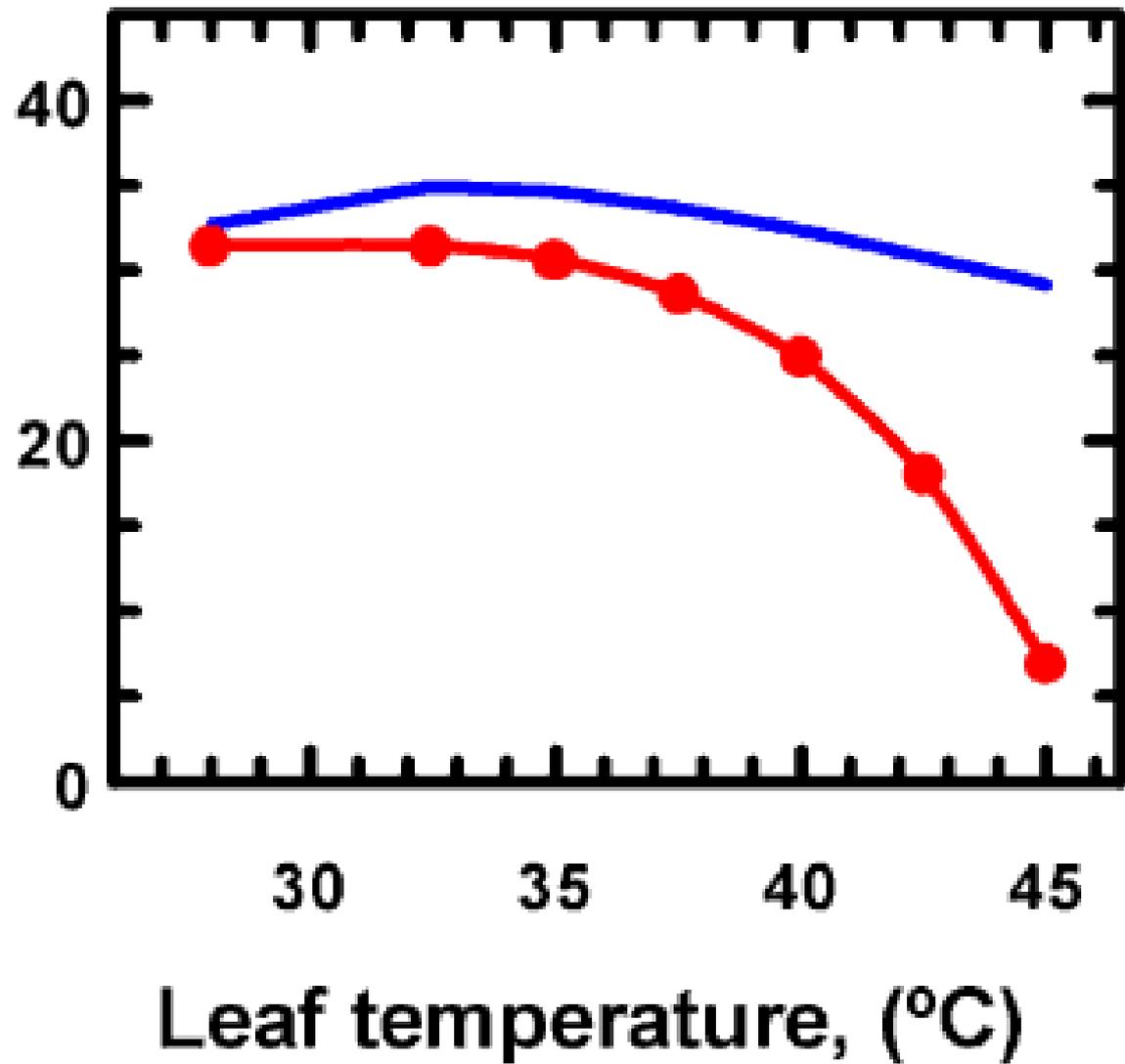


- ◆ ANIMALS EXPLOIT MICROCLIMAT TO REGULATE TEMPERATURE
- ◆ INSULATION REDUCE HEAT EXCHANGE
- ◆ EVAPORATIVE COOLING IN ANIMALS IS IMPORTANT
- ◆ SOME ANIMALS USE UNIQUE PHYSIOLOGICAL MEANS FOR THERMAL BALANCE
- ◆ COUNTERCURRENT CIRCULATION CONSERVES OR REDUCES BODY HEAT





Net photosynthesis
($\mu\text{mol m}^{-2} \text{s}^{-1}$)





Net photosynthesis

($\mu\text{mol m}^{-2} \text{s}^{-1}$)

