

# DO BOARS COMPENSATE FOR HUNTING WITH HIGHER REPRODUCTIVE HORMONES?

DESIGNED BY THE VISUAL STORIES STUDIO

OVER THE PAST 40 YEARS, THE SUBSTANTIAL POPULATION INCREASES IN WILD BOAR (*SUS SCROFA*) IN AGRICULTURAL, URBAN AND SUBURBAN AREAS HAVE INTENSIFIED HUMAN-BOAR CONFLICTS WORLDWIDE.

THESE CONFLICTS HAVE LED TO ELEVATED ECONOMIC COSTS DUE TO DISEASE SPILLOVER INTO LIVESTOCK AND HUMANS, AS WELL AS DAMAGE TO GARDENS AND INFRASTRUCTURE IN URBAN AREAS AND TO AGRICULTURAL CROPS.

TO MINIMIZE CONFLICT WITH WILD BOARS, THE MOST COMMON AND WIDESPREAD MANAGEMENT TOOL APPLIED THROUGHOUT THE WORLD IS HUNTING.

MORE THAN 3 MILLION WILD BOARS ARE HUNTED EVERY YEAR IN EUROPE. FURTHERMORE, THE NUMBER OF HUNTED WILD BOARS IS CONSTANTLY RISING.

PREVIOUS RESEARCH HAS SHOWN THAT HIGH HUNTING PRESSURE STIMULATES EARLIER SEXUAL MATURITY LEADING JUVENILE FEMALES TO REPRODUCE EARLIER. THE MECHANISM THAT UNDERLIES THIS EARLIER SEXUAL MATURITY UNDER HIGH HUNTING PRESSURE HAS NOT BEEN EXAMINED TO DATE.



STUDY AREA  
CARMEL COASTAL MOUNTAIN RANGE  
NORTHERN ISRAEL

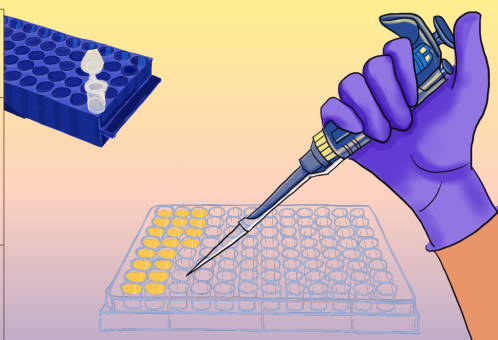
IN THIS STUDY, RESEARCHERS INVESTIGATED THE EFFECTS OF HIGH AND LOW HUNTING PRESSURES AND SOCIAL STRUCTURE ON STRESS HORMONES (CORTISOL) AND REPRODUCTIVE HORMONES (PROGESTERONE) OF FEMALE WILD BOARS IN NORTHERN ISRAEL.

- MAIN PREDATOR: WOLF, EXTINCT.
- HUNTING IS DOMINANT EXOGENOUS STRESS FACTOR
- REGION EXHIBITS HIGHEST HUNTING PRESSURE IN ISRAEL.
- HIGHEST REPORTED NUMBER OF HUMAN-WILD BOAR CONFLICTS IN AGRICULTURAL LANDSCAPES.

THEY PROVIDED PAPER ENVELOPES TO RANGERS AND EXPERT HUNTERS FROM ISRAEL NATURE AND PARKS AUTHORITY [INPA] TO COLLECT HAIR SAMPLES OF HUNTED WILD BOARS FROM FRESH CARCASSES IMMEDIATELY AFTER BOARS WERE SHOT.

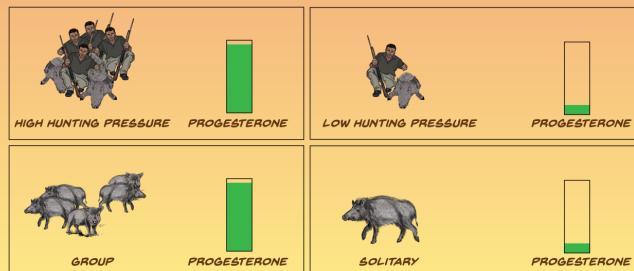
IN THE LABORATORY, RESEARCHERS EXTRACTED AND QUANTIFIED CORTISOL AND PROGESTERONE FROM THE HAIR OF FEMALE WILD BOARS.

	NUMBER OF PROGESTERONE SAMPLES	NUMBER OF CORTISOL SAMPLES
 HIGH HUNTING PRESSURE	78	81
 LOW HUNTING PRESSURE	17	19



THEY DID STATISTICAL ANALYSIS OF HORMONAL DATA TO COMPARE DIFFERENCES IN THE CORTISOL AND PROGESTERONE OF FEMALE WILD BOARS BETWEEN HIGH AND LOW HUNTING PRESSURE AREAS.

## THE FINDINGS IN FEMALE WILD BOARS



THESE ELEVATIONS IN REPRODUCTIVE HORMONES THAT WERE ASSOCIATED WITH HIGH HUNTING PRESSURE MAY LEAD TO A HIGHER REPRODUCTIVE POTENTIAL IN FEMALE WILD BOARS.

THERE WERE NO SIGNIFICANT DIFFERENCES IN CORTISOL LEVELS BETWEEN HIGH AND LOW HUNTING PRESSURE AREAS.

THE RESULTS SUGGEST THAT THE REPRODUCTIVE HORMONAL RESPONSE MAY BE ONE OF THE FACTORS LEADING TO THE RAPID WILD BOARS POPULATION GROWTH WORLDWIDE, DESPITE THE HIGH HUNTING PRESSURE THEY ARE EXPOSED TO.

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