

The Value of Conformation and Structure in Versatile Hunting Dogs

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It's hard to believe, but only a couple of hundred years ago, versatile gundogs were relied upon as an essential means of providing food for entire families. The very lives of these canines and their daily meals likely relied heavily on their physical ability as an asset to provide long-term nourishment for those whom they worked for. It would not have been uncommon for dogs to hunt days, weeks, months on end with no reprieve in a variety of extremely demanding terrains and environments covering hundreds of miles and making countless retrievals with no modern veterinary practices, technologies, or aids. Today, our lives and those of our canine companions are much different, but their essential purpose remains the same. Unsurprisingly, our dogs' innate ability to accomplish their goals still relies on their basic physical structure. Our mission to foster, promote, and improve versatile hunting dog breeds in North America means we must pay equally important attention to physical structure and conformation as field evaluations, hunt tests, and trials.

Have you ever wondered why some dogs appear to “float” across a field while hunting with little to no effort, while others appear to be expending twice the effort to cover half the distance? The answer is in their basic

structure. Basic biology, anatomy, and physiology have taught us that structure defines function in all forms of life, including our four-legged hunting partners. What makes a herder different from a hound, sled dog, terrier, or versatile gun dog ultimately comes back to their intended purpose. Any working dog in each category with the most appropriate structure and conformation will be at a significant advantage in completing their intended job. We, as versatile hunting dog owners and breeders, have the added challenge of fostering breeds intended to do multiple forms of work. After all, our dogs are expected to perform on land, in water, before and after the shot, at all times of year, and in any weather. Our performance evaluations and hunt tests do an excellent job of evaluating these aspects, and so should our physical evaluations, along with our breeding selection criteria.

Historical literature has done a great job of capturing the value of canine structure, but none may be better than “Structure in Action: The Makings of a Durable Dog,” published in 2011 by authors Pat Hastings, Wendy E. Wallace, and Erin Ann Rouse. Pat Hastings was an advocate for purebred dog breeders since 1959 as an owner-handler, judge, breeder, kennel club chair, and all-breed show chair. She authored multiple publications in

the form of books and videos. At the peak of her career, Pat was evaluating hundreds of litters per year for conformational and structural aspects and advising breeders across the country. Her work lives on today in her literature, shared knowledge, and the breed programs she advised. I would highly recommend any working dog owner and breeder to review her works, and especially for those involved with versatile hunting dogs. It is impossible to convey the collective knowledge of Hastings' literature here, but I will provide a summary to show the value and importance of the dogs we love.

HEAD AND NECK

The more correct a dog's mouth is, the more comfortable the dog is. The various teeth in a dog's mouth have specific functions. When we stray from correct dentition and bite, we not only reduce comfort but also diminish key function. Malocclusions like abnormal tooth alignment, undershot bite, overshot bite, open bite, wry mouth, base-narrow canines, lance canines,



cross bites, narrow jaw, missing or extra teeth, just to name a few, all contribute to the health and function of the canine jaw as a tool in the field. The power and strength of the jaws themselves come from the lower jaw in conjunction with the zygomatic arches. A strong underjaw that goes to the end of the upper jaw is very important for the health of the mouth. Placement of eyes is very breed-specific and defines the dog's field of vision. Well-placed eyes of the correct shape avoid injury, especially when working in heavy cover. The versatile hunting breeds are served best with an “almond-shaped” eye alongside tight-fitting eyelids with strong pigmentation. Each standard has its own way of phrasing these descriptions.

Most sporting breeds require a “well-opened” nose for obvious reasons. It is a fault in all breeds to have pink noses or noses without pigmentation, as this offers no protection from ultraviolet rays. A dog's nose provides

breathing, ventilation, and, of course, scenting. Large nostrils designed for maximum air intake help with all these aspects and can even help warm the inhalations of a dog working in extreme cold. A dog's ears are made to gather sound and can move independently. In many breeds, the shape, position, and overall structure of ears even play a role in scenting along with acute hearing when hunting.

The function of the neck is almost completely limited by its width, size, and shape. Most versatile breed standards call for a medium-length neck well-balanced in its structure. Short necks, long necks, stovepipe necks, and ewe necks are a few examples of structural flaws that can impact functional tasks like scenting, reach, balance, swimming, and retrieving.

BODY

Bone size in versatile breeds is generally medium or balanced in an ideal dog. Dogs that are too light-boned risk injury from lack of strength, while overly heavy-boned dogs have increased weight, risk for injury in high-speed activities, and are less agile. Longer spines on the vertebrae of the withers allow for better muscle attachment



and strengthen the front assembly. This is why many versatile breed standards call for pronounced withers. Flat withers or high withers will detract from the overall function of the front assembly, shortening reach and limiting range of motion. A dog's length of back and topline are also innately linked to their purpose. Most versatile breed standards will call for a square dog or a dog close to square. Short backs cause diminished stability and difficulty bending. Dogs with short backs also tend to be top-heavy. Soft toplines, roached toplines, and extremely sloped toplines are all key barometers in the structure of a canine. Typically, if we observe an abnormality in the topline, the root cause comes from incorrect structural elements underneath it. In all cases, these imbalances diminish the overall performance and efficiency of the dog while hunting. Like the back, the croup and tail set are indicators of structural elements of the rear assembly. Croups too steep, too rounded, too flat, or imbalanced are all associated with inefficient movement, drive, balance and detract from function while hunting. Let's also not forget those beautiful tail sets we all like to hunt behind are directly linked to the structure of the croup and tail. A correctly shaped and sized chest with proper spring of the ribs gives a dog maximum cardiovascular efficiency. Like a professional athlete seeking a VO2 Max, canines rely on the build of



their chest for lung capacity, stamina, and endurance. The correct length of loin in most breeds should be no more than one-third the length of the ribcage. Proper length of the loin provides optimal support without costing the dog flexibility or turning capacity.

FRONT ASSEMBLY

A well laid-back shoulder in the front assembly provides the best reach and smooth motion when a dog is working while providing optimal efficiency. The better the shoulder angle, the more reach and shock absorbency in the joints, and the smoother the dog moves. Straight shoulders, wide shoulders, narrow shoulders, high shoulders, short upper arms, and long upper arms all diminish efficiency and soundness of movement in various forms. A well-balanced front assembly with proper length of upper and lower arm in relation to the shoulder, with optimal angulation, create the most efficient, athletic canine movement in the hunting dogs that can seemingly "go all day." Dogs with straight shoulders, imbalanced length of anatomical features in the front assembly, and other faults all must compensate while moving and working in some capacity, and lack shock absorbency and reach. Many of these angles and length measurements can be confirmed in evaluations with modern tools. Elbows are an anatomical hinge for lift-

ing the front leg when a dog is gaiting or jumping. The elbows should be set tight against the ribcage. Loose elbows cause overall instability that can be overserved when they pop out and cause feet to turn in or out, placing additional pressure on lateral extremes. A dog with loose elbows is at a greater risk of injury due to instability that can lead to osteoarthritis, pain, and possible tendonitis. The positions of a dog's front feet can tell us a lot about its structural soundness. Feet turning in or out are being caused by some incorrect aspect of the front assembly. One reference cites a well laid-back shoulder blade (>35-40 degrees) being approximately 2.5 times more effective and efficient than a 20-degree layback. This staggering statistic highlights the intricate relationship of one part of the front assembly as it pertains to the function of the overall system. If we carry these statistical calculations to the field with all other aspects constant, this ultimately means that a versatile gundog with a well laid-back shoulder can cover 5 miles with the same effort it would take a dog with a 20-degree layback to cover 2 miles.

REAR ASSEMBLY

Canines are rear-wheel-drive animals. They rely on their rear assembly to deliver all the power, drive, speed, and stamina in their movement. As in the front assembly, angulation, balance, and length of the respective anatomical parts in relation to one another determine the overall mechanics. The natural line of balance in the rear assembly runs from the point of the buttocks to the tips of the toes. Imbalances in length or angulation skew this line, creating a physiology that is under-angulated or over-angulated at the rear. Knees or stifles are a critical joint that should point slightly inward. Stifles pointing away from the body cause a reduction in weight-bearing capacity and joint strength. Structural faults in various aspects of the rear assembly are the likely culprit of the many injuries like CCL tears or ruptures that we see in performance hunting dogs while testing or working in season. When a dog is stacked and fully bearing weight, the rear legs should be stable, not turning severely from a solid stance. The hocks are the cornerstone of the rear assembly and should have no forward or side motion. The more "let down" a hock is, the more endurance or strength it will have. All the drive and power generated by the muscles in the rear assembly ultimately rely on the hocks as a foundation for delivery and forward movement. This "jumping off" point is critical for any dog that is going to have sufficient drive when hunting. Examples like cow hocks, barrel hocks, and sickle





hocks are forms of structural weakness that diminish drive, strength, and the basic ability of a dog to move forward when working. Most versatile breeds should be approximately the same width at the front and rear. Equal widths are necessary for optimal balance. When analyzing a dog's rear, you should see an inverted U between the rear legs, never an inverted V. Dogs with narrow rears are unable to develop rapid acceleration or speed, as the narrowness puts excess pressure and stress on the outside edges of the rear leg joints. Narrow rears can also contribute to breeding and whelping problems.

FEET

Feet are critical to a hunting dog's durability. In many hunting environments, premature wear or injury to the feet is the cause for having to end a fun day too early. The versatile breeds are best with large feet of the appropriate structure. The smaller the foot, the less cushioning the foot has upon impact with the ground. In all breed standards, a flat foot is considered unacceptable and is prone to breakdown under any conditions. Feet should stand upright and strong, with a consistent, strong union to the pastern at a slight angle. Pads should be sufficiently thick and robust with strong pigmentation to absorb shock with the ground and withstand uneven, challenging terrain of rough texture. The toes



should fit together tightly in a well-knit fashion. All toes should touch the ground on impact. Toes too short can cause an imbalanced distribution of weight and damage to the sides of the toes and pads. Any dog with structural issues in its feet will, at some point, be limited physically in its performance and durability, especially if it encounters challenging terrain.

COAT

The coat of a versatile hunting dog provides crucial protection from the many elements and environments it will encounter when working on land and in water. Accordingly, many standards among the versatile breeds call for a coat of specific length, texture, and coverage to maximize potential protection and serve the dog's ultimate purpose. Color patterns, length, and lay of hair provide aspects of breed type that are individualistic. All versatile hunting breeds should possess coats with adequate coverage, density, length, and texture to provide the protection they need to hunt from the north woods to the western prairies while retrieving waterfowl in icy cold waters, along with countless other environments and hunting situations. If you hunt in environments with elements like cactus, barbed wire, and other extreme challenges, your requirements for coat protection should be even higher.

MOVEMENT

It is not by accident that conformation and structural evaluations analyze a dog's movement as part of the final determination. In biology, structure defines function. As such, a dog's movement is a direct product of its conformation and structure. Dogs with heavily imbalanced movement of any kind likely possess structural faults that are the root cause. Aspects like balance, stability, reach, angulation, extension, drive, and many more are confirmed when a dog physically moves with its collective parts in union. Often, there are jargon phrases to describe imbalances and issues with examples like crabbing, sidewinding, sidestepping, daisy clipping, and pacing. In all these cases, and many, many more, the dog's movement is being impacted by its structural form. An ideal mover with the utmost balance and reach possesses efficiency and soundness that provides the highest level of performance, endurance, and reduced risk of injury.

This brief article can in no way cover all the aspects involved in canine conformation and structure. The details above should help us all appreciate the need for conformation and structure evaluations as part of breeding criteria and selection as part of optimal function, performance, comfort, durability, and healthspan

for all breeds, with specific importance to our versatile hunting companions. The better a dog is made, the more efficiently and effectively it will work. We have the overbearing responsibility of determining the future integrity of the breeds we all love, and these aspects must be a crucial part of that decision-making. Resources pertaining to conformation and structure are available in NAVHDA as part of the evaluation of physical attributes for potential faults that would hinder hunting, including teeth, eyes, and coat. Other, more exhaustive and comprehensive evaluations exist in other organizations like the Versatile Hunting Dog Federation (VHDF) and the American Kennel Club (AKC). The VHDF Conformation and Structure Evaluation (CSE) offers a detailed evaluation of every part of the dog from head to toe, with major emphasis on proper structure and movement in the field, including coat quality in full detail. Many breed clubs have their own requirements and resources for knowledge, including breed-specific standards and minimums, which often include conformation and structure prerequisites. We can all learn from these programs and experiences, and most importantly, we can help the future of our dogs. 🐾

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Jared Deutsch has been a member of NAVHDA for over 10 years. He currently lives in Pennsylvania with his wife and two NAVHDA-registered dogs which he has trained and tested. Jared is an avid wild bird hunter who has hunted various species in 11 states and Canada. Jared is a judge for both performance and conformation evaluations in the Versatile Hunting Dog Federation. Additionally, he currently serves as the Director of Conformation for the VHDF.