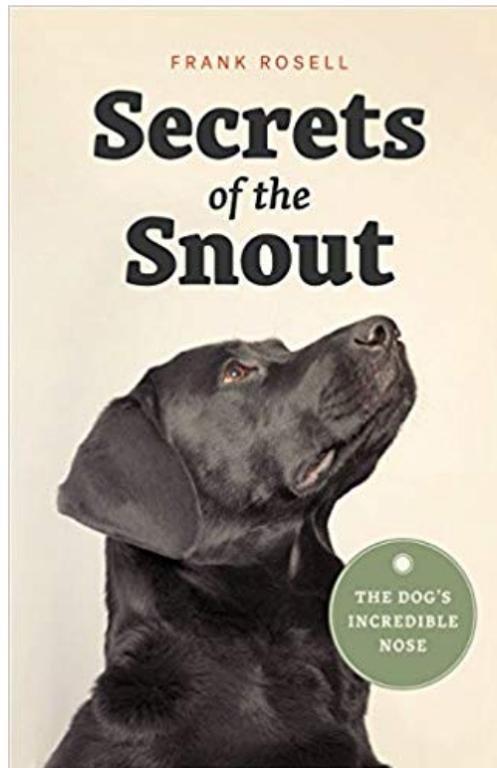


## Reviews

Joan Gordon

### The Nose Knows

Frank Rosell. *Secrets of the Snout: The Dog's Incredible Nose*. Chicago: U of Chicago P, 2018. xiii + 265 pp. \$26 hc.



I walk Henry, my Portuguese Water Dog, four times a day, and am always struck by how different our perceptions of those walks are. I look around, but he sniffs. He can see what I see, but I can't smell what he smells. What is he learning about who has been by, what is going on, where other animals have been? Yes, we greet other dogs, but what about the rabbits, squirrels, rats, possums, raccoons, and coyotes of Chicago? Does he know things about them too? He won't say.

Frank Rosell explores the nose-driven world of dog perception. His book, first appearing in Norwegian in 2014, is an exhaustive but somewhat repetitive survey of the state of knowledge about dogs' ability to smell, with an emphasis on his own specialty

in chemical behavioral ecology, examining “the odor-based communication of many different species” (xi). Each chapter begins with an anecdote illustrating some aspect of dogs’ remarkable sense of smell and goes on to discuss a particular cluster of scientific and practical knowledge loosely connected to that anecdote, emphasizing the role of working dogs. The first three chapters are general introductions to the kinds of work dogs do and the physiology that allows them to excel. The remaining ten chapters go into more depth about these kinds of work, including search and rescue, hunting, policing, customs and border patrol, military applications, medical detection, and pest detection. Most chapters have charts and lists that summarize what has been discussed or bring up other information about dogs.

The first chapter sets the tone, and is a reliable indicator of how the rest of the book will be developed. Its introductory anecdote tells the story of Balto — a Norwegian dog, by the way — who delivered the serum to Nome, Alaska, during the diphtheria outbreak of 1925. It is written in the same simple, solid, but undramatic prose of the rest of the book, and is followed by the rest of the chapter, stressing the development of dogs as working companions. It briefly describes the possible origins of the domesticated dog and has a lengthy description of Rosell’s work training dogs to sniff out beavers for research. Following that is advice on picking the right working dog. Curiously, this includes the information that the best seeing-eye dogs “favor the right leg and the left eye” and “had chest cowlicks that swirled counterclockwise” (19). One longs for the explanation, no doubt genetic, but it does not appear. There is a nice bit about what wagging tails mean when they wag more to the right or left and so on. The chapter ends with a list of the most popular dog breeds in 2013. The chapter is very loosely organized, as one may gather from my summary, although sometimes fascinating and sometimes useful. Indeed, that is the case for every chapter.

Chapter two, “A Dog’s Sense of Smell,” discusses the physiology of a dog’s nose. I learned that it is designed to channel two different airstreams, so sniffing and breathing are two different activities happening simultaneously as the dog inhales. And that sniffing, which “travels to the olfactory epithelium,” is how it processes all those smells so remarkably (27). Humans just don’t have the equipment for the job. This chapter has some gaps, however. For instance, we learn that a professor compares the system to a car’s oil filter, but the comparison is not explained (27-28). The chapter contains a number of apparently unproved assumptions as well — about boxers’ senses of smell versus poodles’ (29), about how the canine nasal mite could affect the ability to smell

(31), how gasoline might negatively affect a dog's sense of smell (33). A section on the human sense of smell seems out of place, inserted in the middle of the chapter.

I have notes on each chapter that question why paragraphs are ordered as they are, what conclusions can be drawn from the facts given, where the author stands on such activities as hunting and poaching, what the relevance of some information is to the topic of the book. Nevertheless, I pick up fascinating and curious pieces of information. For instance, chapter 4, "Pet Finder," invites us to think of the anus as a clock face in order to locate the anal glands (64) — odd yet useful. Chapter 5, "Search and Rescue," gives fans of *Frankenstein* (1818) the evocative fact that "between 1816 and 1818, there were heavy snowstorms" in the Alps that, sadly, "took the lives of many dogs in avalanches while searching for people" (76). Still, why does chapter 6, "On the Hunt," contain a chart of "some of the more common and less common animals hunted, the types of hunting dog groups, and the most common breeds for each form of hunting" (82) or a list of "Different Factors That Will Influence a Hunt" (89) alongside much more relevant information on how clothing, weather conditions, wind, temperature, time of day, and so on, can affect a dog's ability to smell. Indeed, I suspect that this might be the most useful chapter of all if one is a hunter, although I suspect our readership may not include too many hunters.

While I enjoyed finding out so many things about dogs' noses, how they work and the work they do, and I was happy to store away nifty facts, the book itself seemed a bit of a jumble. I never detected any organizing principle within paragraphs or chapters, beyond the kinds of jobs dogs do. The style was very flat, whether because of or in spite of translation, even in the anecdotes meant to draw us into each chapter. Necessarily, given the publication history, there was no research after 2014, and I found myself wondering if more insight has been gained since then. Inevitably, I was not able to discern the specific secrets of Henry's snout, which is drawing on its snoring function as I write.