## The hot zone book reviews examples

Literature, Books



## **Book Review of**

"The Hot Zone" written by Richard Preston is a non-fiction English book published by Anchor in 1995. It contains 420 pages and based on Richard Preston article "Crisis in the Hot Zone." It is a thriller that deals with the source and occurrences relating to viral hemorrhagic fever especially Ebola viruses and Marburg viruses. The filo viruses, Ebola Virus called EBOV, Sudan Virus called SUDV, Marburg Virus called MARV and Ravn Virus called RAVV are the agents of level four of Biosafety. They are enormously hazardous to humans due to being very contagious and with an extraordinary casualty rate. There is no established treatment for these viruses. In this book, Richard Preston narrates the story of discovery of a virus Reston Virus in Virginia, about twenty kilometers away from Washington DC. First section of the book deals with the history of filo viruses and probable origin of AIDS. The writer narrates the story of a person named Charles Monet was suspected to have caught the MARV during his visit to Kitum Cave on Mount Elgon in Kenya. He discusses the detailed progression of the disease starting from headache and backache to the final stage where Charles Monet internal organs fail, and he bleeds out part of his own body. The young physician who treats Monet becomes infected with MARV. This section discusses the story of Nancy Jackson and details about viruses, levels of biosafety and different procedures related to the disease. The second section discusses the discovery of Reston Virus among the monkeys imported from Kenya in Virginia and actions taken by United States Defence Forces and United States Centre for Disease Control. Third section deals with the details about Reston epizootic including strain of the virus that spreads easily through air,

however, does not infect humans. The fourth section of the book covers the story of writer's visit to the Kitum Cave considered to be the home of the animal containing Ebola virus.

The book narrates the real story of the spread of a disease for which there was no cure available and people died with no help extended by the authorities. The story is fascinating and very touching and compels the reader to put his heart in the book while going through the deadly scenes depicted in the book about the death of people suffering from an infectious disease. It is a good book, an international bestseller and a good read. Chapter 1 Something in the Forest. It indicates the time of 1980 on the eve of New Year's Day. The chapter narrates the story of a man named Charles Monet who with his girlfriend went on a visit to Mount Elgon in Kenya. The two friends spent the night at the mountain and went to Kitum Cave. After they had returned home, on the third day, Monet started to have a headache. He went to see a doctor who advised him to go to some better hospital in Nairobi. He immediately got the air ticket for Nairobi and on his way, he started vomiting blood with some black liquid. He reached the hospital and lost all his senses and went into shock. He started to vomit even more blood with a sound of choking from his throat. Then his bowls opened up splitting blood and intestinal lining. It was the dying process occurred to nine out of ten people who suffered from the deadly disease.

Chapter 2 Jumper. It indicates the period of January 1980. Charles Monet bled all over the floor of the hospital and died on the hospital floor. He was then taken to Intensive Care Unit where Dr. Muskoke, a young physician tried to revive the breath of Monet. When the Dr. Muskoke put the scope in his

throat, Monet vomited red and black fluid all over in the area, some on nurses and mostly on Dr. Muskoke. Some of the fluid went into the mouth of Dr. Muskoke but he kept trying to revive Monet. In the end, when they tried to give him the blood, a place where needle was probed, blood came out from everywhere. The cause of death of Monet remained a mystery. A few days later, Dr. Muskoke came to the hospital with a severe headache. Chapter 3 Diagnosis. In this chapter, they found out the type of virus that killed Charles Monet and Dr. Muskoke. They identified it as the Marburg virus that is an African organism with a German name. The Marburg erupted in a factory named Behring Works in 1967 that produced a vaccine from kidney cells of green monkeys from Africa. The factory imported monkeys regularly from Uganda. There were around six hundred monkeys shipped to Behring Works in 1967. Few of the animals were sick and in few days' time, the virus spread and few monkeys died splitting the blood and intestinal linings. Very soon the virus Marburg spread out in humans in the city through a worker of the factory. In 1982, information was revealed that the monkey trader did not kill the sick monkeys before shipping. The factory owner boxed the monkeys and shipped the sick monkeys to an island named Lake Victoria. Chapter 4 A Woman and a Soldier. It indicates the period of September 1983. This chapter deals with Major Nancy Jaax and her husband Major Gerald Jaax, who were both veterinarians and part of Army Veterinary Corps. Their duty included taking care of Army dogs, horses, rabbits, pigs, mice and monkeys. They are responsible for inspecting the food for the animals. Maj Nancy's hand are too delicate to deal with the danger associated with the animals. She was cooking the food and tried to open a can with a butter knife. He

father had always stopped her from using a butter knife to open a can, but she would never listen to him. While trying to open the can, she got a cut on her right hand through the tang of the blade.

Chapter 5 Project Ebola. It indicates the period of September 1983. The second virus introduced with the name of Ebola Virus with three different strains; Ebola Sudan, Ebola Zaire, Ebola Reston. The virus is related to Marburg and from the same family of filo virus; a family comprising Marburg and Ebola Viruses. They also have the name of thread viruses. Ebola virus is named after Ebola River a tributary of Zaire River. The first emergence of Ebola was in 1976 when the virus spread in fifty-five villages along Ebola river. Ebola is yet to make a breakthrough in humans and has been found off and on at varied places in Africa. It is a simple virus that kills human quickly through devastating effects. It is related to measles, rabies and mumps. It triggers the rash on the whole body like measles and resembles madness and rabies psychosis.

Chapter 6 Total Immersion. It indicates the period of September 1983. It gives out the details on monkeys found everywhere honking and groaning. The monkeys rattled the confines and jumped around. The monkeys got injected with the hottest kind of virus Ebola that was the Mayinga strain of Ebola Zaire. The chapter talks about the discovery of Mayinga strain of Ebola Zaire. It was a woman who dies of the virus in 1976. Major Nancy Jaax inspects a monkey who is down due to the injected virus and study the monkey after opening the belly of a monkey wearing three pairs of gloves. They found a lot of hemorrhaging in the primate and liver of the monkey was found swollen. Major Nancy Jaax got the infection during the experiment and

two healthy monkeys also got infected which made the Richard Preston conclude that the Ebola can travel through air.

Chapter 7 Ebola River. In indicates the period of summers of 1976. It discussed the progression on examination of Ebola Sudan and Ebola Zaire strains of filo virus. Ebola Zaire was injected seven years later into a monkey at USAMIRD. There was a storekeeper in the cotton factory in Sudan who died, and two of his co-worker also died in a span of few days. Before the death, they infected their wives and killed at least fifty percent of their sixteen generations. Ebola Zaire hit a hospital at the town of Maridi and killed all the patients and compound personnel. Within a period of two months, another deadly virus emerged 500 miles away from the town of Maridi.

Chapter 8 Cardinal. It indicates the period of September 1987. Johnson got blood from someone anonymous who gave him a box containing serum from a ten year old Peter Cardinal, a boy from Denmark. The boy had died the day prior to when the serum reached Johnson. He had died of a level four viruses. Johnson wanted to destroy the serum as many other samples, but he did not and kept it. Few months back, Peter had gone on vacation to Kenya. While in Mombasa, Peter eyes went red that worried his mother, and she took him to the hospital who treated him for Malaria. His mother was worried and knew it was not Malaria. She took him to Nairobi where Peter turned blue and developed red spots on the body. Skin got separated from the internal tissues as Peter Cardinal bled out under his skin.

Chapter 9 Going Deep. Johnson was curious about the Kitum Cave, and he decided to set up an expedition to the cave. The expedition took place in the

spring of 1988. They carried along the disposable biosafety level four philosophy while moving through the jungle. On their way, they used launch poles to mark the way so as not to lose the way. They placed pigs and monkey on their way wired so that leopards did not eat them. They were able to collect variety of insects from the cave between thirty and seventy thousands. They caught crawling bugs by using stickum paper and used light traps to hunt down flying insects. They tried to catch everything living inside the cave and trying to run out of the cave. Placed monkey cages below bats in order to see if the bats were carrier of the virus. They took blood samples from local people who lived and kept their animals in the cave, but none of them was tested positive for Marburg. Even blood samples from all the other animals and insects showed no sign of Marburg virus.

Chapter 10 Reston. It indicates the period of October 1989. The chapter discusses about the monkey house in Reston. The Hazelton monkey house was a Reston Primate Quarantine Unit and research facility housing different types of monkeys. Hundred wild monkeys were transported from Philippines in October 1989. The monkeys were shipped by Ferlite Farm located few kilometers from the city of Manila and were caught from coastal rain forests from the island of Mindanao. Those monkeys would eat crab and lived in mangroves along the river. They used such monkeys as laboratory animals due to being cheap and easily available. The day the shipment reached Reston, something strange happened that changed the life of Colonel Jerry Jaax. The Colonel had a younger brother John Jaax, a prominent banker and businessman. He was a shareholder in a company that made plastic for credit cards. He was shot dead in his office. In November 1989, in just one

month time, twenty-nine monkeys out of hundred shipped died which was not normal. There was something wrong with the monkeys that needed to be sorted out. Dan Dalgard decided to examine a monkey numbered 053. He found out that spleen was hard, dry and huge. Dalgard took a throat swap in order to preserve the things still alive.

Chapter 11 Into Level 3. It indicates the period of November 1989. Dan Dalgard who was a doctor of veterinary medicine, was working as a consultant with Reston Primate Quarantine Unit. He got involved the USAMRID at Fort Detrick in the situation of dying monkeys. Dalgard believed it was only the Simian Hemorrhagic fever in the monkeys. Simian Hemorrhagic fever is a virus deadly to monkeys but ineffective against humans. Dalgard sent the pieces of froze meat of monkey 053 to the USAMRID; the meat was obsessed with the diversity of viruses. Jharling and other technicians at USAMRID made the virus grow. Meanwhile, more monkeys had dies at the Reston Primate Quarantine Unit.

Chapter 12 Exposure. It indicates the day of 17 November 1989. Thomas Geisbert was doing his internship at the institute, and his father was the chief building engineer at the institute. Thomas was in charge of operating

pictures of the tiny pieces of meat and detecting the viruses in the meat.

Thomas was expert in using the electron microscope, and he observed many samples to improve his skills. When he received a sample from Cardinal boy from Africa, he gave much attention to it and spent many days observing the sample. The viruses attracted him and because of continuous observation, the shapes got permanent in his mind. He was interested to look at the

the electron microscope which was an essential equipment in making

sample from Atlanta to see the shape of Simian Hemorrhagic fever virus. He noticed something different while observing Simian Hemorrhagic fever virus as if he had seen these shapes before as well. It reminded him of Cardinal boy from Africa and the viruses exactly looked alike in both the samples. He immediately called Peter Jharling to come and see the samples. Peter Jharling came and looked at the flask in level three lab, opened it, waved his hand and smelled his hand to see if there was any smell, there wasn't any. He offered Thomas to smell; he did the same and felt no smell. It brought the headache.

Chapter 13 Thanksgiving. It indicates the period from 20-25 November 1989. The chapter discusses the thanksgiving event, and families going around see their relatives and families in the town. Jaax family had two thanksgivings as they spent the first half of the day with Jerry's family and the second half with Nancy's family and had dinner with them in Kansas. Her father was dying of cancer and did not have enough time. Dan went to see his in-laws in Pittsburg with his wife and kids. On his return from Pittsburg, Dan went to see the monkeys, and see if there were any more changes. He found that five more monkeys had died during the thanksgiving.

Chapter 14 Medusa. It indicates the time of 27 November 1989. Thomas decided to take the pictures of viruses from the monkey house and sliced the viruses on the thin strips; got the electron microscope and started the work. He went to darkroom to develop the pictures of viruses. There was something wrong with the cell as it was a mess all around in the cell. He remembered that he had sniffed the hot agent along with Peter Jharling. He then realized the mistake.

Chapter 15 The First Angle. It indicates the date of 27 November 1989.

Thomas took the pictures to his boss Peter Jharling who looked carefully at the pictures. Then the thought of sniffing the hot agent came into his mind, and he decided to follow the chain of commands Colonel Clarence James was the chief of the disease assessment division and was responsible for dealing with unknown dangers. He showed Peter the pictures who agreed that it was something like Marburg. Jharling told his boss he intended to glow the cells with human blood to check if Marburg had infected him. He thought of going to slammer where people exposed to level four agents were sent to cure. He never wanted to go to the slammer.

Chapter 16 The Second Angel. Thomas returned to work to take more pictures of the virus to ensure it was a real virus. Jharling wanted to know his state of affairs and his infection to Marburg as soon as possible. He started working on his test with the idea of the possibility of a second agent present in some animals. He called Dalgard to stop him from interacting with monkeys till the time they knew what exactly was the cause of their death. Jharling knew if the samples glowed with his blood, he was positive for the virus. He tested on three samples, and only one glowed which was the Mayinga. The animals did not have Marburg, but they were dying of Ebola Zaire.

Chapter 17 Chain of Command. It indicates the time of 1600 hours on Tuesday 27 November 1989. Peter Jharling informed his boss about the result who hurried to the lab to see the results. The colonel was an expert on biohazards, and he thought he could handle the situation. He immediately contacted the managing director of the United States Army Medical Research

and Medical Command who was shocked after looking at the pictures of the viruses. He decided to control the virus in the monkey house before the virus could spread to Washington DC.

Chapter 18 Garbage Bags. It indicates the day of 29 November 1989. Colonel Peter, Nancy Jaax and Gene Johnson went to the monkey house to see the sample prepared for them. The slides had slices of the lever of monkeys died in the monkey house. There was a mess in the cells, and something had destroyed the cells and terrain. It was like a carpet bombing done on the lever. They got the sample in the shape of eight large garbage bags filled with dead monkeys from a gas station. They loaded the truck and went back to the institute to work on the samples.

Chapter 19 Space Walk. It indicates the time of 1400hours on 29 November 1989. After arriving at the institute in the afternoon, they took the samples to the examination room. They dissected the monkeys to find out the type of virus and did not find any bloody lesions inside any monkey. No blood was found in the intestine also. Thus, Nancy could not confirm the presence of Ebola virus in those samples. Then she found something; the emerging virus was like a bird crossing the skyline in the evening.

Chapter 20 Shoot Out. Colonel Peter called everyone in the world who knew about Ebola virus. He called Joe MaCormick of the CDC who had the experience of living in a hut that was full of people dying from the virus in Southern Sudan in Africa. Joe offered his help for the control of disease, but Army did not accept it so as not to let the CDC take over the operation. Chapter 21 The Mission. When they were waiting for the permission to enter the building, Colonel Peter asks Colonel Jerry to lead the team inside the

monkey house. They planned to bring all the monkeys in one room and see if diseases still spread. The decided to treat the entire building as level four hot zone. They used the gear Johnson had used during his campaign to Kitum Cave.

Chapter 22 Renaissance. It indicates the day of 30 November 1989. Army finally got involved in the issues of the monkey house. When army entered the monkey house, they found a bad smell, the smell of dead primates. Before they locked the laboratories, Nancy, Dalgard and C. I went to room H to look at the stick monkeys. Many cages were empty and left over monkeys were sitting with blank faces. They avoided making eye contacts with the monkeys and stayed away from their range of spitting. Monkeys looked dangerous, and they remained carful during their visit to room H. Chapter 23 Insertion. It indicates the day of 1 December 1989. They started their mission at the Reston Monkey House. Peter explained the task force about the top level state to trace the path of Ebola virus and suspected people who might have been exposed to the deadly virus. They all wore their space suits inside the building and then they entered the staging room where they could hear the feint cries of the monkeys. They wanted to have a look at the monkeys in the monkey house. They found the monkeys depressed.

Chapter 24 A Man Down. A worker of Reston Monkey House Milton Frantig got seriously sick. He had been using the respirator while going inside the monkey house. He started feeling sick in the stomach perhaps due to the bad smell in the building. The monkey rooms were not being cleaned. Dan Dalgard went to see Hazelton Washington and started weeping there about

the health of his two workers who were infected with a virus. He requested him to close the monkey house and hand it over to the army. Peter was shocked to know one of his men was down. Dalgard was shocked to know that he was not being sent to the slammer. He wanted to go to the slammer and wanted to be looked after by more experienced people there. Chapter 25, 91- Tangoes. It indicates the period of 4-5 December 1989. The Army soldiers could not sleep much that night. Gene Johnson was worried when he called his kids that night. Jerry Jaax was the commanding officer of the 91-Tangos at the Institute. Jerry made a buddy system and two individuals went inside the monkey house at a time. They had three missions and Jerry briefed everyone about the dangers involved in the mission. Jerry and his sergeant buddy went to the monkey house first of all. Jerry found the animals in bad shape all sick and dull with blood coming out of their nostrils. They started giving anesthesia to the monkeys to remove them from cages. Chapter 26 Inside: Early Evening. Four hundred and fifty monkeys were to die that evening in the Reston Monkey House. These were too many animals, but they were to die in order to keep the human race safe and alive. The fear of disease gave soldiers a rush to hurry out of the building. One of the soldiers Rhonda Williams got exposed to the air inside building when her blower cut off, and she got a hole in her suit. Press vehicles meanwhile reached the institute but found nothing visible. The lady changed the dress and went to the woods to relieve herself and there she saw two used hypodermic syringes.

Chapter 27 Bad Day. On the second day of the massive operation on Wednesday, a scientist from USAMIRD named Thomas Ksiazek is successful

in developing a test for checking the infection from Ebola virus. Milton

Frantig was not infected, and it comes as a surprise that none of the monkey house workers were diagnosed with Ebola. One monkey escaped that might have been infected with Ebola and situation got tense. A monkey woke up while a soldier was trying to take a sample from an unconscious monkey.

Chapter 28 Decon. Nancy received a call from his brother about the deteriorating health of his father. She decided not to go to see his father in the middle of a crisis and went to work. Her father passed away, and she flew over the weekend to attend the funeral of her father. The little monkey that escaped was caught. Workers got exposed to the remains of a monkey died about two months back when they open the freezer. The decon team arrives to decontaminate the infected workers.

Chapter 29 The Most Dangerous Strain. It indicates the time of January 1990 when Hazleton research Products started again to import monkeys from Philippines. The new monkeys brought with them the fresh Ebola, and CDC chose to let the disease run as a trial. The disease ran from one room to another room and killed approximately every other monkey in the room. The virus named Ebola Reston killed every monkey in the monkey house. The four animal caretakers got infected with the Ebola Reston, but virus vacated the system with no ill effects on the four caretakers. The author got a chance to meet Nancy.

Chapter 30. Highway. Three years later, Richard Preston travelled to Africa at his own to see the origin of Marburg and other viruses. The author and his friend travelled on Kinshasa highway that practically divided Africa into two. They analyze that AIDS spread during the construction of the highway in

1970, and it travelled along the pavement of the road. They also went to Mount Elgon and Kitum Cave.

Chapter 31 Camp. Richard Preston was accompanied by few other persons on his visit to Kitum Cave. The area was unsafe and keeping an armed guard was a requirement in the area. He had the list on instructions to be followed if he fell sick. They camp at the same place where Charles Monet had camped years ago. He suspected everything around as a host to Marburg. He had put on a level four protection suit before he entered the cave. He found the cave completely dry and dusty, a perfect environment for a virus to nurture.

The book "The Hot Zone" is a very interesting book and by the time reader is over with the reading of book, he suspects himself to be infected by one of the deadly filo viruses. That is how the writer absorbs the reader in the book. A very informative and interesting book that has already been established as one of the best books on the subject. Richard Preston has been successful in conveying his viewpoint to the reader, and the intended aim of the book well achieved by the audience. It has been very tough to write the summary of each chapter with a total of 31 chapters because it is different from the book review. Reading the whole book and writing review is much easier as compared to writing a summary for each chapter. It has taken my lots of energies to make it to a conclusion.

## Work cited

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